msi
IPC

Industrial Platform Solution

We Customize Your Business

Ready platforms for convenient integration in industrial applications

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MSI reserves the right to change the specifications without prior notices.

About MSI Industrial Platform Computing(IPC)

MSI has over-20-year experience in motherboard manufacturing and ranked among the world's top 3 largest motherboard manufacturers, recognized internationally for high quality and stability by clients and individual users. In 2006, MSI entered Industrial Platform Computing market with successful and professional experience in motherboard domain, and started providing reliable products with expansion capability. MSI manufacturers high-quality embedded boards and systems for various applications, auch as digital signage, medical electronics, ATM, POS, Kiosk, industrial automation, gaming, utility, and transportation. By solid R&D and manufacturing ability, MSI serves clients with efficient DMS(Design manufacture Service) solution, and expects to become the best partner for worldwide SI in industrial Platform Computing domain.

We Customize Your Business

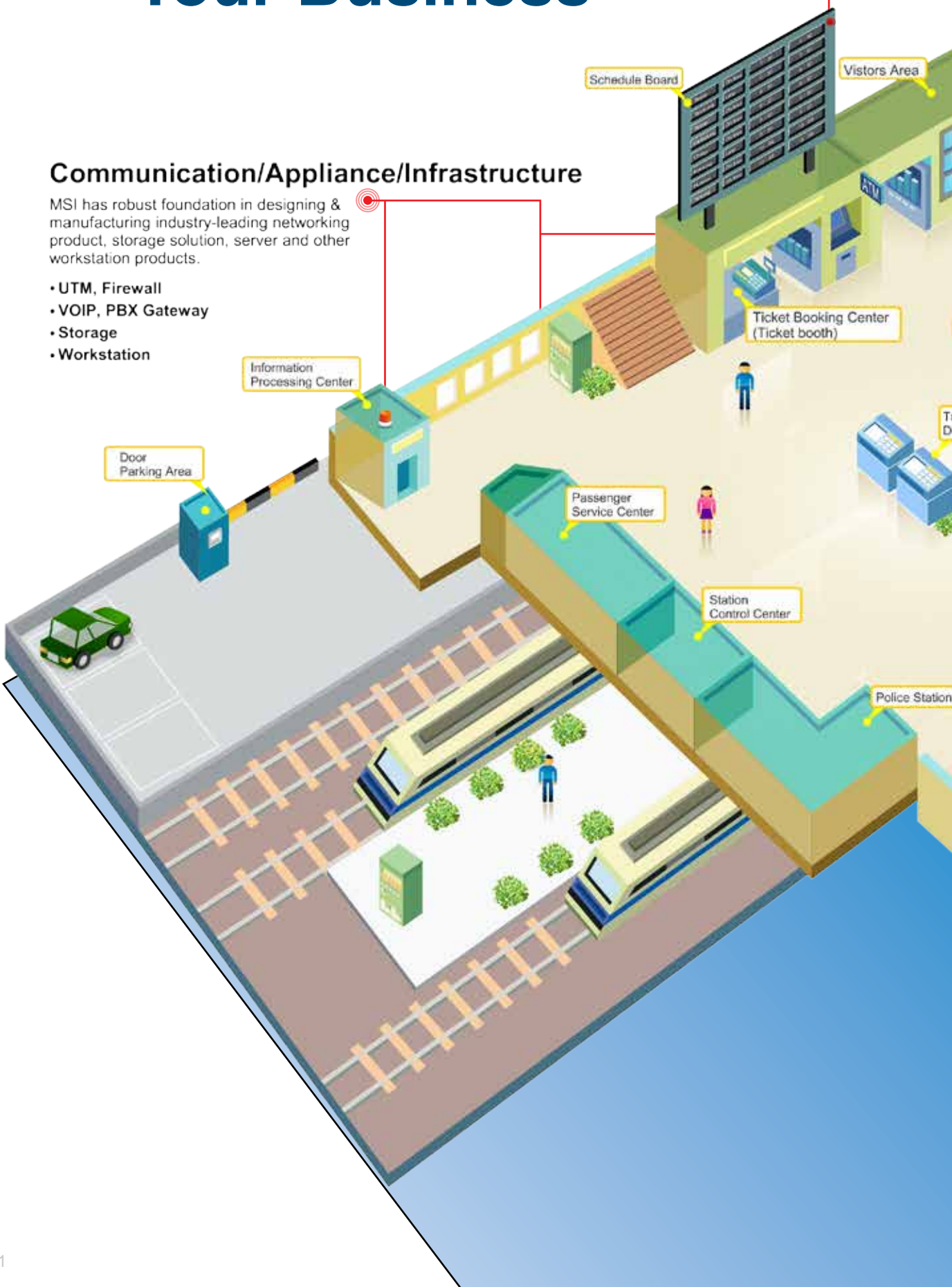
Multimedia & Gaming

MSI offers several platforms which support the latest video format, 3D application, multimedia content & stream technology.

Communication/Appliance/Infrastructure

MSI has robust foundation in designing & manufacturing industry-leading networking product, storage solution, server and other workstation products.

- UTM, Firewall
- VOIP, PBX Gateway
- Storage
- Workstation



- Digital Signage
- DMA, IPTV, STB
- Amusement, Arcade, Gaming & Entertainment
- In-Vehicle information

Transaction Terminals

MSI delivers motherboard/barebone/system to support Point of Sale, ATM, KIOSK, medical, military and other financial multiple applications.

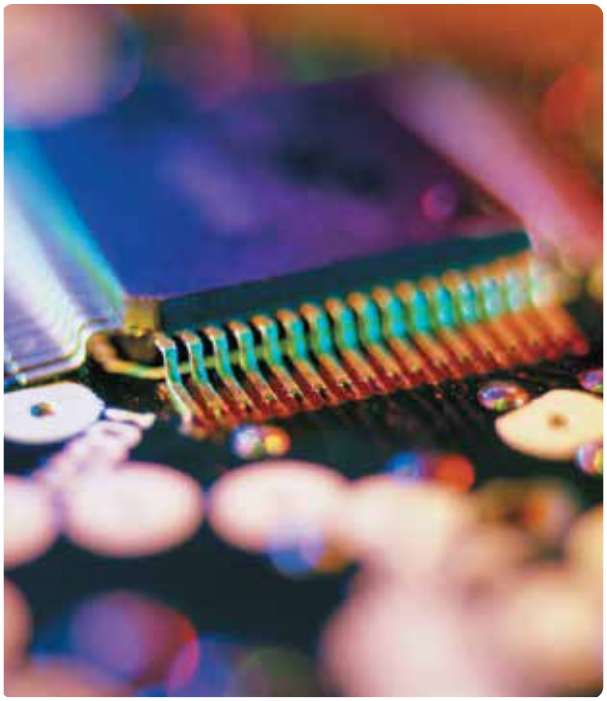
- POS
- ATM
- POI

Industrial PC

MSI has introduced the latest computer technology to SBC (Single Board Computer) for Automation Computing & Surveillance Server Application.

- Automation
- Surveillance
- Controller

Our Strengths



1. Various Solutions:
providing various systems based on x86 and RISC platforms

2. Energy Saving:
through experienced system design to reduce heat generation and increase operation reliability

3. Strict Quality Control:
through a 7-stage QC system from design to mass production, to assure quality

4. Multi Compliance*:
FCC, CE, C-Tick, BSMI, VCC, WEEE, GOST, CCC, and RoHS compliant

5. High R&D Capability:
in IPC team, 55% with 5-10 years of experience and 35% with over 10 years experience

* Actual compliance is followed as shown on product specifications.

MSI DMS

MSI DMS

- Intel member and commitment.
- Over 150 kinds of board solutions for time-to-market.
- Speedy ODM process in 3 month.
- Experienced firmware, SW and HW engineering.

System Integration

- 2D/3D mechanical design team.
- Embedded OS porting.
- OS pre-install, function validation, system burn-in and testing.
- Private branding services.

Manufacture Capability

- PCBA production line, lead-free ready!
- System assembly line and dynamic burn-in rooms.
- Complete quality assurance systems.
- Certified by ISO 9001, ISO 14001, OHSAS 18001, ISO 13485, QC 080000, and ISO/TS 16949.

The Heart of Gold

- Rich application know-how and act as your consultant.
- Always be customer-oriented and flexible to fulfill your needs.
- Long-term artnership and customer satisfaction.
- Act as your virtual design house and manufacturing site.

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MSI IPC

Key to Life Automation

MSI IPC Customizes Your Business

HMI Panel PC

Small/medium/large size LCD touch Panel PC for HMI applications

Industrial System

Powerful/fanless series embedded systems to fit industrial settings

Embedded Board

Comprehensive EPIC, COM Express, 3.5”, Mini-ITX, ATX, µATX boards

Preliminary

Preliminary

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Model		MS-9A70	MS-9A61-HM76-FS	MS-9A61-HM76-BS	MS-9A61-D2550-FS	MS-9A61-D2550-BS
		HMI Panel PC				
Display	LCD Size	10.4"	15"		15"	
	Resolution	800 x 600	1024x768		1024x768	
	Brightness (cd/m^2)	230	250		250	
	Contrast Ratio	500:1	700:1		700:1	
	Support Colors	16.2M/262K	16.2M		16.2M	
	Pixel Pitch (H/Vmm)	0.264x0.264	0.297x0.297		0.297x0.297	
	Viewing Angle	H: 140~160 degree V: 110~130 degree	H: 140~160 degree V: 100~120 degree		H: 140~160 degree V: 100~120 degree	
Touch Panel		5-wire resistive touch panel	5-wire resistive touch panel		5-wire resistive touch panel	
System Processor	CPU	Intel® Atom™ Processor D2550, Dual Core	3rd Gen Intel® Core™ Mobile Processor (Max. TDP: 35W)		Intel® Atom™ Processor D2550, Dual Core	
	Frequency	1.86GHz (Dual Core)	Up to 3.6 GHz		1.86 GHz	
	L2 Cache	1MB	Up to 6MB		1MB	
	CPU Type	BGA	Socket G2 (rPGA 989)		BGA	
	Chipset	Intel® NM10 Express	Intel® HM76 Express		Intel® NM10 Express	
	BIOS	AMI	AMI		AMI	
Memory	Technology	Single-channel DDR3 SO-DIMM 1066MHz	Dual-channel DDR3/DDR3L 1066/1333/1600MHz		Single-channel DDR3 1066MHz	
	Max. Capacity	Up to 4GB	Up to 16GB		Up to 4GB	
	Socket	1 x 204-pin SO-DIMM	2 x 204-pin SO-DIMMs		1 x 204-pin SO-DIMM	
Graphic	Controller	Intel® GMA3650 Graphics	Intel® HD Graphics		Intel® GMA3650 Graphics	
	Graphic Memory	Shared system memory up to 759 MB SDRAM	Shared system memory up to 1.7 GB SDRAM		Shared system memory up to 759 MB SDRAM	
	Multiple Display	2 independent displays	3 independent displays		2 independent displays	
	Display Interface	DVI-I up to 1920 x 1200	DVI-I up to 2560 x 1600 DP up to 2560 x 1600		HDMI up to 1920 x 1200 VGA up to 1920 x 1200	
Ethernet	Controller	2 x Intel® I210-AT GbE LAN	1 x Intel® 82579 PHY LAN 1 x Intel® I210-AT PCIe LAN		2 x Realtek® RTL8111E GbE LAN	
Audio	Controller	Realtek® ALC887 HD Audio Codec	Realtek® ALC887 HD Audio Codec		Realtek® ALC887 HD Audio Codec	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer		256-level Watchdog Timer	
	Smart Fan	Yes	Yes		N/A	
Expansion Slot	Mini-PCIe	2 x Full-size (one with SIM holder)	2 x Full-size		1 (optional for WiFi module)	
Storage	SATA	1 x 2.5" HDD/SSD	320G 2.5" HDD		320G 2.5" HDD	
	mSATA	1 (shared with Mini-PCIe)	1 (shared with Mini-PCIe)		1 (shared with Mini-PCIe)	
I/O Interface	RJ-45	2	2		2	
	Audio	N/A	1 x Line-out, 1 x Line-in, 1 x Mic-in		1 x Line-out, 1 x Line-in, 1 x Mic-in	
	USB	4 x USB 2.0	4 x USB 2.0 2 x USB 3.0		4 x USB 2.0	
	Serial	1 x RS-232/422/485; 3 x RS-232	5 x COM COM1: RS-232/422/485 (0V/5V/12V) COM 2~5: RS-232 (0V/5V/12V)		5 x COM COM1: RS-232/422/485 (0V/5V/12V) COM 2~5: RS-232 (0V/5V/12V)	
	PS/2	N/A	1		2	
	HDMI	N/A	N/A		1	
	DVI	1 (DVI-I)	1 (DVI-I)		N/A	
	DisplayPort	N/A	2		N/A	
	VGA	N/A	N/A		1	
	Antenna	2 openings reserved for antennas	3 openings reserved for antennas		3 openings reserved for antennas	
Power Supply	DC Input	DC-in 9~36V Wide-Range	DC-in 12V pluggable connectors with latch (GND, V-, V+)		DC-in 12V pluggable connectors with latch (GND, V-, V+)	
	AC Input	N/A	Optional 84W external AC-DC adapter for AC input		Optional 84W external AC-DC adapter for AC input	
Environment	Operating Temperature	0~45°C (HDD) 0~50°C (SSD or mSATA)	0~45°C (HDD) 0~50°C (SSD or mSATA)		0~45°C (HDD) 0~50°C (SSD or mSATA)	
	Operating Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing		10 ~ 90%, non-condensing	
	Storage Temperature	-20 ~ 70°C	-20°C ~ 80°C		-20°C ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing		10 ~ 90%, non-condensing	
	Vibration	Operating, 0.25 Grms, 5-300 Hz, 3 aes	Operating, 0.25 Grms, 5-300 Hz, 3 aes		Operating, 0.25 Grms, 5-300 Hz, 3 aes	
	Shock	Operating, 3 G, half sine 11 ms	Operating, 3 G, half sine 11 ms		Operating, 3 G, half sine 11 ms	
Physical Characteristics	Housing	SECC/SGCC, aluminum	SGCC, open frame	SGCC, aluminum	SGCC, open frame	SGCC, aluminum
	Dimensions	285.0mm x 225.0mm x 55.5mm	380.2mm x 290mm x 78mm	410mm x 340mm x 79.78mm	380.2mm x 290mm x 78mm	410mm x 340mm x 79.78mm
	Weight	2.5 kg (without bezel)	4.9 kg (without bezel)	5.6 Kg (with bezel)	4.9 kg (without bezel)	5.6 Kg (with bezel)
	Mounting	VESA mount	VESA 75/100		VESA 75/100	
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI		FCC, CE, C-Tick, VCCI, BSMI	
	Safety	UL, TUV, CB	TUV, CB		TUV, CB	
Software Platform	OS Support	Windows 7 (32-bit), Windows XP (32-bit)	Windows 8, Windows 7		Windows 7, Windows XP	

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Model		MS-9A62-HM76-FS	MS-9A62-HM76-BS	MS-9A62-D2550-FS	MS-9A62-D2550-BS
		HMI Panel PC			
Display	LCD Size	17"		17"	
	Resolution	1280x1024		1280x1024	
	Brightness (cd/m^2)	350		350	
	Contrast Ratio	1000:1		1000:1	
	Support Colors	16.7M		16.7M	
	Pixel Pitch (H/Vmm)	0.264x0.264		0.264x0.264	
	Viewing Angle	H: 140~160 degree V: 140~160 degree		H: 140~160 degree V: 140~160 degree	
Touch Panel		5-wire resistive touch panel		5-wire resistive touch panel	
System Processor	CPU	3rd Gen Intel® Core™ Mobile Processor (Max. TDP: 35W)		Intel® Atom™ Processor D2550, Dual Core	
	Frequency	Up to 3.6 GHz		1.86 GHz	
	L2 Cache	Up to 6MB		1MB	
	CPU Type	Socket G2 (rPGA 989)		BGA	
	Chipset	Intel® HM76 Express		Intel® NM10 Express	
	BIOS	AMI		AMI	
Memory	Technology	Dual-channel DDR3/DDR3L 1066/1333/1600MHz		Single-channel DDR3 1066MHz	
	Max. Capacity	Up to 16GB		Up to 4GB	
	Socket	2 x 204-pin SO-DIMMs		1 x 204-pin SO-DIMM	
Graphic	Controller	Intel® HD Graphics		Intel® GMA3650 Graphics	
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM		Shared system memory up to 759 MB SDRAM	
	Multiple Display	3 independent displays		2 independent displays	
	Display Interface	DVI-I up to 2560 x 1600 DP up to 2560 x 1600		HDMI up to 1920 x 1200 VGA up to 1920 x 1200	
Ethernet	Controller	1 x Intel® 82579 PHY LAN 1 x Intel® I210-AT PCIe LAN		2 x Intel® 82574L GbE LAN	
Audio	Controller	Realtek® ALC887 HD Audio Codec		Realtek® ALC887 HD Audio Codec	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer		256-level Watchdog Timer	
	Smart Fan	Yes		N/A	
Expansion Slot	Mini-PCIe	2 x Full-size		1 (optional for WiFi module)	
Storage	SATA	320G 2.5" HDD		320G 2.5" HDD	
	mSATA	1 (shared with Mini-PCIe)		1 (shared with Mini-PCIe)	
I/O Interface	RJ-45	2		2	
	Audio	1 x Line-out, 1 x Line-in, 1 x Mic-in		1 x Line-out, 1 x Line-in, 1 x Mic-in	
	USB	4 x USB 2.0 2 x USB 3.0		4 x USB 2.0	
	Serial	5 x COM COM1: RS-232/422/485 (0V/5V/12V) COM 2~5: RS-232 (0V/5V/12V)		5 x COM COM1: RS-232/422/485 (0V/5V/12V) COM 2~5: RS-232 (0V/5V/12V)	
	PS/2	1		2	
	DVI	1 (DVI-I)		1 (DVI-D)	
	DisplayPort	2		N/A	
	VGA	N/A		1	
	Antenna	3 openings reserved for antennas		3 openings reserved for antennas	
Power Supply	DC Input	DC-in 12V pluggable connectors with latch (GND, V-, V+)		DC-in 12V pluggable connectors with latch (GND, V-, V+)	
	AC Input	Optional 84W external AC-DC adapter for AC input		Optional 84W external AC-DC adapter for AC input	
Environment	Operating Temperature	0~45°C (HDD) 0~50°C (SSD or mSATA)		0~45°C (HDD) 0~50°C (SSD or mSATA)	
	Operating Humidity	10 ~ 90%, non-condensing		10 ~ 90%, non-condensing	
	Storage Temperature	-20°C ~ 80°C		-20°C ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing		10 ~ 90%, non-condensing	
	Vibration	Operating, 0.25 Grms, 5-300 Hz, 3 aes		Operating, 0.25 Grms, 5-300 Hz, 3 aes	
	Shock	Operating, 3 G, half sine 11 ms		Operating, 3 G, half sine 11 ms	
Physical Characteristics	Housing	SGCC, open frame	SGCC, aluminum	SGCC, open frame	SGCC, aluminum
	Dimensions	410.2mm x 337mm x 85.6mm	483mm x 399mm x 87.43mm	410.2mm x 337mm x 85.6mm	483mm x 399mm x 87.43mm
	Weight	6.5 kg (without bezel)	7.6 Kg (with bezel)	6.5 kg (without bezel)	7.6 Kg (with bezel)
	Mounting	VESA 75/100		VESA 75/100	
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI		FCC, CE, C-Tick, VCCI, BSMI	
	Safety	TUV, CB		TUV, CB	
Software Platform	OS Support	Windows 8, Windows 7		Windows 7, Windows XP	

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Model		MS-9A63-HM76-FS	MS-9A63-HM76-BS	MS-9A63-D2550-FS	MS-9A63-D2550-BS
		HMI Panel PC			
Display	LCD Size	19"		19"	
	Resolution	1280x1024		1280x1024	
	Brightness (cd/m^2)	350		350	
	Contrast Ratio	1000:1		1000:1	
	Support Colors	16.7M		16.7M	
	Pixel Pitch (H/Vmm)	0.294x0.294		0.294x0.294	
	Viewing Angle	H: 150~170 degree V: 140~160 degree		H: 150~170 degree V: 140~160 degree	
Touch Panel		5-wire resistive touch panel		5-wire resistive touch panel	
System Processor	CPU	3rd Gen Intel® Core™ Mobile Processor (Max. TDP: 35W)		Intel® Atom™ Processor D2550, Dual Core	
	Frequency	Up to 3.6 GHz		1.86 GHz	
	L2 Cache	Up to 6MB		1MB	
	CPU Type	Socket G2 (rPGA 989)		BGA	
	Chipset	Intel® HM76 Express		Intel® NM10 Express	
	BIOS	AMI		AMI	
Memory	Technology	Dual-channel DDR3/DDR3L 1066/1333/1600MHz		Single-channel DDR3 1066MHz	
	Max. Capacity	Up to 16GB		Up to 4GB	
	Socket	2 x 204-pin SO-DIMMs		1 x 204-pin SO-DIMM	
Graphic	Controller	Intel® HD Graphics		Intel® GMA3650 Graphics	
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM		Shared system memory up to 759 MB SDRAM	
	Multiple Display	3 independent displays		2 independent displays	
	Display Interface	DVI-I up to 2560 x 1600 DP up to 2560 x 1600		HDMI up to 1920 x 1200 VGA up to 1920 x 1200	
Ethernet	Controller	1 x Intel® 82579 PHY LAN 1 x Intel® I210-AT PCIe LAN		2 x Intel® 82574L GbE LAN	
Audio	Controller	Realtek® ALC887 HD Audio Codec		Realtek® ALC887 HD Audio Codec	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer		256-level Watchdog Timer	
	Smart Fan	Yes		N/A	
Expansion Slot	Mini-PCIe	2 x Full-size		1 (optional for WiFi module)	
Storage	SATA	320G 2.5" HDD		320G 2.5" HDD	
	mSATA	1 (shared with Mini-PCIe)		1 (shared with Mini-PCIe)	
I/O Interface	RJ-45	2		2	
	Audio	1 x Line-out, 1 x Line-in, 1 x Mic-in		1 x Line-out, 1 x Line-in, 1 x Mic-in	
	USB	4 x USB 2.0 2 x USB 3.0		4 x USB 2.0	
	Serial	5 x COM COM1: RS-232/422/485 (0V/5V/12V) COM 2~5: RS-232 (0V/5V/12V)		5 x COM COM1: RS-232/422/485 (0V/5V/12V) COM 2~5: RS-232 (0V/5V/12V)	
	PS/2	1		2	
	DVI	1 (DVI-I)		1 (DVI-D)	
	DisplayPort	2		N/A	
	VGA	N/A		1	
	Antenna	3 openings reserved for antennas		3 openings reserved for antennas	
Power Supply	DC Input	DC-in 12V pluggable connectors with latch (GND, V-, V+)		DC-in 12V pluggable connectors with latch (GND, V-, V+)	
	AC Input	Optional 84W external AC-DC adapter for AC input		Optional 84W external AC-DC adapter for AC input	
Environment	Operating Temperature	0~45°C (HDD) 0~50°C (SSD or mSATA)		0~45°C (HDD) 0~50°C (SSD or mSATA)	
	Operating Humidity	10 ~ 90%, non-condensing		10 ~ 90%, non-condensing	
	Storage Temperature	-20°C ~ 80°C		-20°C ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing		10 ~ 90%, non-condensing	
	Vibration	Operating, 0.25 Grms, 5-300 Hz, 3 aes		Operating, 0.25 Grms, 5-300 Hz, 3 aes	
	Shock	Operating, 3 G, half sine 11 ms		Operating, 3 G, half sine 11 ms	
Physical Characteristics	Housing	SGCC, open frame	SGCC, aluminum	SGCC, open frame	SGCC, aluminum
	Dimensions	447.2mm x 364mm x 85.6mm	483mm x 399mm x 87.43mm	447.2mm x 364mm x 85.6mm	483mm x 399mm x 87.43mm
	Weight	6.7 kg (without bezel)	7.6 Kg (with bezel)	6.7 kg (without bezel)	7.6 Kg (with bezel)
	Mounting	VESA 75/100		VESA 75/100	
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI		FCC, CE, C-Tick, VCCI, BSMI	
	Safety	TUV, CB		TUV, CB	
Software Platform	OS Support	Windows 8, Windows 7		Windows 7, Windows XP	

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Preliminary

NEW

NEW

Model		MS-9A66		MS-9A68	MS-9A29
		Embedded System			
System Processor	CPU	4th Gen Intel® Core™ i5 4570TE, Dual Core	4th Gen Intel® Core™ Celeron G1820TE, Dual Core	3rd Gen Intel® Core™ Mobile Processor (optional)	Intel® Atom™ Processor D2550, Dual Core
	Frequency	2.7GHz	2.2GHz	Depends on CPU	1.86GHz (Dual Core)
	L2 Cache	4MB	2MB	Depends on CPU	1MB
	CPU Type	Socket (LGA1150)		Socket G2 (rPGA 989)	BGA
	Chipset	Intel® Q87 Express		Intel® QM77/HM76 Express	Intel® NM10 Express
	BIOS	AMI		AMI	AMI
Memory	Technology	Dual-channel DDR3 1600/1333MHz		Dual-channel DDR3 1600/1333MHz	Single-channel DDR3 1066MHz
	Max. Capacity	Up to 16GB		Up to 16GB	Up to 4GB
	Socket	2 x 204-pin SO-DIMMs		2 x 204-pin SO-DIMMs	1 x 204-pin SO-DIMM
Graphic	Controller	Intel® HD Graphics 4600	Intel® HD Graphics	Intel® HD Graphics	Intel® GMA3650 Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM		Shared system memory up to 1.7 GB SDRAM	Shared system memory up to 759 MB SDRAM
	Multiple Display	3 Independent Displays		2 independent displays (SNB CPU only) 3 independent displays (IVB CPU only)	2 independent displays
	Display Interface	DP up to 3840 x 2160 DVI-I up to 1920 x 1200		DP up to 2560 x 1600 DVI-I up to 1920 x 1200	VGA up to 1920 x 1200 HDMI up to 1920 x 1200
Ethernet	Controller	1 x Intell® I217GbE-PHY LAN 1 x Intell® I210-AT		1 x Intel® 82579 PHY LAN 1 x Intel® I210-AT PCIe LAN	2 x Intel® 82583V GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec		Realtek® ALC887 HD Audio Codec	Realtek® ALC887 HD Audio Codec
H/W Monitor	Watchdog Timer	256-level Watchdog Timer		256-level Watchdog Timer	256-level Watchdog Timer
	Smart Fan	N/A		Yes	N/A
TPM	Controller	Infineon SLB9635TT1.2		N/A	N/A
Expansion Slot	PCIe x16	1		N/A	N/A
	PCI	3		N/A	N/A
	Mini-PCIe	N/A		2 x Full-size (1 w/ SIM Holder)	2 x Full-size (one with SIM holder)
Storage	SATA	1 x 2.5" HDD		1 x 2.5" HDD/SSD	1 x 2.5" HDD/SSD
	mSATA	N/A		2 (shared with Mini-PCIe slots)	1
	CFast	1		N/A	N/A
I/O Interface	RJ-45	2		2	2
	Audio	1 x Mic-in 1 x Line-out 1 x Line-in		1 x Mic-in 1 x Line-out 1 x Line-in	1 x Line-out
	USB	4 x USB 3.0 2 x USB 2.0		2 x USB 3.0 6 x USB 2.0	6 x USB 2.0
	Serial	5 x COM ports COM1: RS232/422/485, 0V/5V/12V COM2: RS232/422/485, 0V COM3~5: RS-232, 0V		4 x COM ports COM1~4: RS-232, 0V/5V/12V	4 x COM ports COM1: RS-232/422/485 COM2~4: RS-232
	Parallel	1		N/A	N/A
	PS/2	1		1	N/A
	HDMI	N/A		N/A	1
	DVI	1 (DVI-I)		1 (DVI-I)	N/A
	DisplayPort	2		2	N/A
	VGA	N/A		N/A	1
	Antenna	N/A		1	2 openings reserved for antennas
Power Supply	DC Input	DC-In 9-36V Wide-Range pluggable connectors with latch (GND, V-, V+)		DC-in 19V	DC-in 12V
	AC Input	N/A		N/A	N/A
Environment	Operating Temperature	-10 ~ 50°C		0 ~ 50°C	0 ~ 45°C (HDD) 0 ~ 50°C (SSD or mSATA)
	Operating Humidity	10 ~ 90%, non-condensing		10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C		-20 ~ 80°C	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing		10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Vibration	Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)		Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)	Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)
	Shock	Operating, 3 G, half sine 11 ms duration (w/ HDD)		Operating, 3 G, half sine 11 ms duration (w/ HDD)	Operating, 3 G, half sine 11 ms duration (w/ HDD)
Physical haracteristics	Dimensions	172mm x 225mm x 213mm		180mm x 182mm x 42mm	196mm x 136mm x 43mm
	Weight	4.86 kg		1.80 kg	1.20 kg
	Mounting	Wall mount		VESA mount	Wall mount
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI		FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI
	Safety	TUV		CB, UL	BSMI
Software Platform	OS Support	Windows 8 (32-bit), Windows 7 (32/64-bit), Windows XP (32/64-bit)		Windows 8 (32-bit), Windows 7 (32/64-bit), Windows XP (32/64-bit)	Windows 7 (32-bit), Windows XP (32-bit)

Model		MS-9A55		MS-9A45	MS-9A25
		Embedded System			
System Processor	CPU	Intel® Core™ i5-3337U, Dual Core	Intel® Celeron® Processor 827E, Single Core	Intel® Atom™ Processor D2550, Dual Core	Intel® Atom™ Processor N270
	Frequency	1.8GHz	1.4GHz	1.86GHz	1.86GHz
	L2 Cache	3MB	1.5MB	1MB	512KB
	CPU Type	BGA		BGA	BGA
	Chipset	Intel® HM76 Express	Intel® HM65 Express	Intel® NM10 Express	Intel® 945GSE + ICH7M
	BIOS	AMI		AMI	AMI
Memory	Technology	Dual-channel DDR3 1600/1333/1066 MHz		Singal-channel DDR3 1066MHz	Dual-channel DDR2 400/533MHz
	Max. Capacity	Up to 16GB		Up to 4GB	Up to 2GB
	Socket	2 x 204-pin SO-DIMMs		2 x 204-pin SO-DIMMs	1 x 200-pin SO-DIMM
Graphic	Controller	Intel® HD Graphics		Intel® GMA3600 Graphics	Intel® GMA950 Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM		Shared system memory up to 759 MB SDRAM	Shared system memory up to 759 MB SDRAM
	Multiple Display	2 independent displays		2 independent displays	Single display
	Display Interface	HDMI up to 1920 x 1200 DVI-I up to 1920 x 1200		HDMI up to 1920 x 1200 DVI-I up to 1920 x 1200	HDMI up to 1920 x 1200 DVI-I up to 1920 x 1200
Ethernet	Controller	1 x Intel® 82579 PHY LAN 1 x Intel® I210-AT PCIe LAN		2 x Intel® 82574L PCIe LAN	2 x Intel® 82574L PCIe LAN
Audio	Controller	Realtek® ALC886/888S HD Audio Codec		Realtek® ALC886 HD Audio Codec	Realtek® ALC888 HD Audio Codec
H/W Monitor	Watchdog Timer	256-level Watchdog Timer		256-level Watchdog Timer	256-level Watchdog Timer
TPM	Controller	Infineon SLB9635TT1.2		N/A	N/A
Expansion Slot	Mini-PCIe	1 x Full-size 1 x Half-size, mSATA		1 x Full-size 1 x Half-size	2 x Full-size (1 w/ SIM Holder)
Storage	SATA	1 x 2.5" HDD/SSD		1 x 2.5" HDD	1 x 2.5" HDD
	mSATA	1		1	N/A
I/O Interface	RJ-45	2		2	2
	Audio	1 x Mic-in 1 x Line-out		1 x Mic-in 1 x Line-out	1 x Mic-in 1 x Line-out
	USB	2 x USB 3.0 4 x USB 2.0		3 x USB 2.0	3 x USB 2.0
	Serial	2 x COM portss COM1: RS-232/422/485, 0V/5V/12V COM2: RS-232, 0V/5V/12V		1 x COM port COM1: RS-232/422/485, 0V/5V/12V	1 x COM port COM1: RS-232/422/485, 0V/5V/12V
	HDMI	1		1	1
	DVI	1 (DVI-I)		1 (DVI-I)	1 (DVI-I)
	Antenna	2		2	2
Power Supply	DC Input	DC-in 19V		DC-in 19V	DC-in 20V
	AC Input	N/A		N/A	N/A
Environment	Operating Temperature	0 ~ 40°C		0 ~ 40°C	0 ~ 40°C
	Operating Humidity	10 ~ 90%, non-condensing		10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C		-20 ~ 80°C	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing		10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Vibration	Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)		Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)	Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)
	Shock	Operating, 3 G, half sine 11 ms duration (w/ HDD)		Operating, 3 G, half sine 11 ms duration (w/ HDD)	Operating, 3 G, half sine 11 ms duration (w/ HDD)
Physical haracteristics	Dimensions	196mm x 285mm x 33mm		180mm x 255mm x 19mm	180mm x 255mm x 19mm
	Weight	2.60 kg		1.08 kg	1.08 kg
	Mounting	VESA mount		VESA mount	VESA mount
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI		FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI
	Safety	TUV, CB, UL		TUV, CB, UL	TUV, CB, UL
Software Platform	OS Support	Windows 8 (32-bit), Windows 7 (32/64-bit), Windows XP (32/64-bit)		Windows 7 (32-bit), Windows XP	Windows XP, Linux Suse

MSI reserves the right to change the specifications without prior notices.

Model		MS-9A58	MS-9A19
		Embedded System	
System Processor	CPU	Intel® Atom™ Processor D525, Dual Core	Intel® Atom™ Processor N270
	Frequency	1.8GHz	1.6GHz
	L2 Cache	1MB	512KB
	CPU Type	BGA	BGA
	Chipset	Intel® ICH9R	Intel® 945GSE + ICH7M
	BIOS	AMI	AMI
Memory	Technology	Dual-channel DDR3 800MHz	Dual-channel DDR2 400/533MHz
	Max. Capacity	Up to 4GB	Up to 2GB
	Socket	2 x 204-pin SO-DIMMs	1 x 200-pin SO-DIMM
Graphic	Controller	Intel® GMA3150 Graphics	Intel® GMA950 Graphics
	Graphic Memory	Shared system memory up to 384 MB SDRAM	Shared system memory up to 256 MB SDRAM
	Multiple Display	Single display	Single display
	Display Interface	VGA up to 1920 x 1200	DVI-I up to 1920 x 1080
Ethernet	Controller	4 x Intel® 82574L PCIe LAN (optional by-pass function for 2 LAN)	2 x Intel® 82574L GbE LAN
Audio	Controller	N/A	Realtek® ALC888 HD Audio Codec
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer
Expansion Slot	Mini-PCIe	1	1 x Full-size
Storage	SATA	1 x 2.5" HDD	1 x 2.5" HDD/SSD
I/O Interface	RJ-45	4	2
	Audio	N/A	N/A
	USB	2 x USB 2.0	4 x USB 2.0
	Serial	1 x COM port COM1: RS-232/422/485, 0V/5V/12V	1 x COM port COM1: RS-232/422/485, 0V/5V/12V
	DVI	N/A	1 (DVI-I)
	VGA	1	N/A
	Antenna	1	N/A
Power Supply	DC Input	DC-in 19V	DC-in 12V
	AC Input	N/A	N/A
Environment	Operating Temperature	0 ~ 40°C	0 ~ 40°C
	Operating Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Vibration	Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)	Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)
	Shock	Operating, 3 G, half sine 11 ms duration (w/ HDD)	Operating, 3 G, half sine 11 ms duration (w/ HDD)
Physical haracteristics	Dimensions	180mm x 180mm x 44mm	195mm x 145mm x 43mm
	Weight	1.20 kg	1.17 kg
	Mounting	VESA mount	Wall mount
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI
	Safety	N/A	BSMI
Software Platform	OS Support	Windows 7 (32-bit), Windows XP, Linux SLED 11	Windows XP

Model		MS-98D1 EPIC Board	MS-9988 COM Express Carrier Board	MS-98D7 COM Express Module Board
Processor	CPU	Intel® Atom™ Processor D2550/N2800/ N2600, Dual Core	N/A	3rd Gen Intel® Mobile Core™ i7-3517UE/i3-3217UE/1020E Celeron Processor
	Frequency	1.86GHz (Dual Core, for D2550/N2800) 1.6GHz (Dual Core, for N2600)	N/A	2.8GHz/1.6GHz/2.2GHz
	L2 Cache	1MB	N/A	4MB/3MB/2MB
	CPU Type	BGA	N/A	BGA
	Chipset	Intel® NM10 Express	N/A	Intel® QM77 Express
	BIOS	AMI	AMI	AMI
Memory	Technology	Single-channel DDR3 1066MHz (DDR3 800MHz for N2600)	N/A	Single-channel DDR3 1600MHz
	Max. Capacity	Up to 4GB (for D2550/N2800) Up to 2GB (for N2600)	N/A	Up to 8GB
	Socket	1 x 204-pin SO-DIMM	N/A	1 x 204-pin SO-DIMM
Display	Controller	Intel® GMA3650 Graphics	N/A	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 759 MB SDRAM	N/A	Shared system memory up to 1.7 GB SDRAM
	LVDS	2 x LVDS (LVDS1/LVDS2) LVDS1: single-channel 24-bit (for D2550); single-channel 18-bit (for N2800/N2600) LVDS2: dual-channel 24-bit (add chrontel 7511B chipset)	Dual channel 24-bit (depends on module board)	Dual channel 24-bit
	VGA	N/A	1	1
	DVI	Yes (DVI-I)	N/A	3 DDI ports support DVI/HDMI/DP (DDI1 supports Video out also)
	HDMI	N/A	N/A	
	DisplayPort	N/A	3	
	Multiple Display	2 independent displays	2 independent displays 3 independent displays	2 independent displays 3 independent displays
	Display Mode	LVDS1 up to 1440 x 900 (for D2550); up to 1366 x 768 (for N2800/N2600) LVDS2 up to 1920 x 1200 DVI-I up to 1920 x 1200	Depends on module board	VGA up to 2048 x 1536 LVDS up to 1920 x 1200 @60 Hz 3 x DDI: HDMI/DVI up to 1920 x 1200 @60 Hz; DP up to 2560 x 1600 @60 Hz
Ethernet	Controller	2 x Intel® I210-AT GbE LAN	1 x RJ45 for COM Express module board	1 x Intel® 82579LM GbE-PHY LAN (AMT 8.0 supported)
Audio	Controller	Realtek® ALC887 HD Audio Codec	Realtek® ALC887 HD Audio Codec	Support HD audio interface to carrier board
Super I/O	Controller	Fintek F81866	Fintek F81866	N/A
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes	Yes	Yes
TPM	Controller	N/A	N/A	Pin header
I/O Interface	USB	6 x USB 2.0 (4 x rear; 2 x internal)	4 x USB 3.0 (4 x rear) 4 x USB 2.0 (2 x rear; 2 x internal)	8 x USB 2.0 (to carrier board) 4 x USB 3.0 (to carrier board)
	Serial	6 x COM (COM1: rear; COM2~6: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~6: RS-232, 0V/5V/12V	2 x COM (internal) COM1 RS-232/422/485, 0V/5V/12V COM2 RS-232, 0V/5V/12V	2 x COM (to carrier board)
	Parallel	1	1	N/A
	PS/2	1 (pin header)	1 (wafer connector)	N/A
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V	8-bits (4 x GPI; 4 x GPO)	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCIe x16	N/A	1	1
	PCIe x1	N/A	6	7
	PCI	*	N/A	N/A
	Mini-PCIe	2 x Full-size (one w/ SIM holder; one w/ mSATA)	1 x Full-size	N/A
Storage	SATA	1 x SATA 2.0	2 x SATA 3.0; 2 x SATA 2.0	2 x SATA 3.0; 2 x SATA 2.0
	mSATA	1	N/A	N/A
Power Supply	DC	DC-in 9-36V Wide-Range	N/A	N/A
	ATX	N/A	ATX-24P, 12V-4P	ATX +12 V and +5 VSB (standby power) AT: +12 V
Environment	Operating Temperature	-10 ~ 60°C	0 ~ 60°C	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C	-20 ~ 80°C	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
Form Factor	Dimensions	165mm x 115mm (EPIC)	305mm x 244mm (ATX)	95mm x 95mm (COM Express compact module)
	Weight	0.37 kg	0.6 Kg	95 g
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI

* 1 x PCI-104

MSI reserves the right to change the specifications without prior notices.

Model		MS-9896 V1.0	MS-9886	MS-9856
		3.5" Mainbaord		
Processor	CPU	Intel® Atom™ Processor D2550/N2800/ N2600, Dual Core	Intel® Atom™ Processor N270	Intel® Atom™ Processor N270
	Frequency	1.86GHz (Dual Core; for D2550/N2800) 1.6GHz (Dual Core; for N2600)	1.6GHz	1.6GHz
	L2 Cache	1MB	512KB	512KB
	CPU Type	BGA	BGA	BGA
	Chipset	Intel® NM10 Express	Intel® 945GSE+ ICH7M	Intel® 945GSE + ICH7M
	BIOS	AMI 32Mbit SPI	AMI	AMI
Memory	Technology	Single-channel DDR3 1066MHz (DDR3 800MHz for N2600)	Single-channel DDR2 400/533 MHz	Single-channel DDR2 400/533 MHz
	Max. Capacity	Up to 4GB	Up to 2GB	Up to 2 GB
	Socket	1 x 204-pin SO-DIMM	1 x 200-pin SO-DIMM	1 x 200-pin SO-DIMM
Display	Controller	Intel® GMA3650 Graphics	Intel® GMA950 Graphics	Intel® GMA950 Graphics
	Graphic Memory	Shared system memory up to 759 MB SDRAM	Shared system memory up to 256 MB SDRAM	Shared system memory up to 256 MB SDRAM
	LVDS	2 x LVDS (LVDS1/LVDS2) LVDS1: single-channel 24-bit (for D2550); single-channel 18-bit (for N2800/N2600) LVDS2: dual-channel 24-bit (add chrontel 7511B chipset)	Dual channel 24-bit	Dual channel 18-bit
	VGA	1	1	N/A
	DVI	N/A	N/A	1 (DVI-I)
	HDMI	1	N/A	N/A
	Multiple Display	2 independent displays	Dual display	Dual display
	Display Mode	LVDS1 up to 1440 x 900 (for D2550); up to 1366 x 768 (for N2800/N2600) LVDS2 up to 1920 x 1200 VGA up to 1920 x 1200 HDMI up to 1920 x 1200	LVDS up to 1920 x 1080 VGA up to 1920 x 1080	LVDS up to 1920 x 1080 VGA up to 1920 x 1080 DVI-D up to 1920 x 1080
Ethernet	Controller	2 x Intel® 82583V GbE LAN	1 x Intel® 82574L GbE LAN	2 x Intel® 82574L GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec	Realtek® ALC887 HD Audio Codec	Realtek® ALC888 HD HD Audio Codec
Super I/O	Controller	Fintek F81866	Fintek F81865	ITE IT8783F
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes	N/A	N/A
I/O Interface	USB	6 x USB 2.0 (2 x rear; 4 x internal)	4 x USB 2.0 (2 x rear; 2 x interal)	4 x USB 2.0 (2 x rear; 2 x internal)
	Serial	4 x COM (internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V	5 x COM ports (COM1: rear; COM2~5: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~5: RS-232, 0V/5V/12V	4 x COM ports (COM1: rear; COM2~4: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V
	PS/2	N/A	N/A	1 (pin header)
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V	8-bits (4 x GPI; 4 x GPO), 5V	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	Mini-PCIe	2 x Full-size (one with SIM holder)	1 x Full-size	1 x Full-size
Storage	SATA	1 x SATA 2.0	1 x SATA 2.0	2 x SATA 2.0
	mSATA	1	N/A	N/A
	CompactFlash	N/A	1	1
Power Supply	DC	DC-in 12V	DC-In 9-36V Wide-Range	DC-in 12V
	ATX	N/A	N/A	N/A
Environment	Operating Temperature	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C	-20 ~ 80°C	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
Form Factor	Dimensions	146mm x 102mm (3.5")	146mm x 102mm (3.5")	146mm x 102mm (3.5")
	Weight	0.28 kg	0.23 kg	0.24 kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI

Model		MS-9868	MS-9643
		PICMG Mainboard	
Processor	CPU	Intel® Core™ 2 Duo, Pentium™ 4, Pentium™ D Processor	Intel® Pentium™ 4, Pentium™ D, Celeron™ D Processor
	Frequency	Depends on CPU	Depends on CPU
	L2 Cache	Depends on CPU	Depends on CPU
	CPU Type	Socket (LGA 775)	Socket (LGA 775)
	Chipset	Intel® 945GC + ICH7R	Intel® Q965 + ICH8
	BIOS	AMI	Award
Memory	Technology	Dual-channel DDR2 533/667MHz	Dual-channel DDR2 533/667/800MHz
	Max. Capacity	Up to 4 GB	Up to 4 GB
	Socket	2 x 240-pin DIMMs	2 x 240-pin DIMMs
Display	Controller	Intel® GMA950 Graphics	Intel® GMA3100 Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	Shared system memory up to 256 MB SDRAM
	VGA	1	1
	Multiple Display	Single display	Single display
	Display Mode	LVDS up to 1920 x 1080 VGA up to 1920 x 1080	LVDS up to 1920 x 1080 VGA up to 1920 x 1080
Ethernet	Controller	2 x Realtek® RTL8111C GbE LAN	2 x Marvell 88E8056A2 GbE LAN
Audio	Controller	Realtek® ALC888 HD Audio Codec	Realtek® ALC888 HD Audio Codec
Super I/O	Controller	Fintek F81865	Winbond W83627EHG
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes	Yes
I/O Interface	USB	8 x USB 2.0 (internal)	4 x USB 2.0 (internal)
	Serial	4 x COM (internal) COM1&2: RS-232/422/485 COM3&4: RS-232	2 x COM (internal) COM1&2: RS-232/422/485
	Parallel	1 (pin header)	1 (pin header)
	PS/2	1	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V	N/A
Storage	SATA	4 x SATA 2.0	2 x SATA 2.0
	IDE	1	1
Power Supply	DC	N/A	N/A
	ATX	ATX/AT-Power 24P, 12V-4P, power from PICMG 1.0 backplane	ATX/AT-Power 12V-4P, power from PICMG 1.0 backplane
Environment	Operating Temperature	0 ~ 60°C	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
Form Factor	Dimensions	338mm x 122mm (PICMG 1.0)	338mm x 122mm (PICMG 1.0)
	Weight	0.40 kg	0.40 kg
Certification	EMC	FCC, CE	FCC, CE, C-Tick, VCCI, BSMI

MSI reserves the right to change the specifications without prior notices.

Model		MS-98F5		MS-98E3		MS-98E0	MS-98D3
		Mini-ITX Mainboard					
Processor	CPU	Intel® Atom™ Bay Trail J1900, Quad Core	Intel® Atom™ Bay Trail N2920, Quad Core	Intel® Atom™ Bay Trail J1900, Quad Core	Intel® Atom™ Bay Trail N2920, Quad Core	Intel® Core™ i7/i5/i3/Celeron Mobile Processor	4th Gen Intel® Desktop H3 Core i7/i5/i3/Celeron Processor
	Frequency	2.0 GHz	1.86 GHz	2.0 GHz	1.86 GHz	Depends on CPU	Depends on CPU
	L2 Cache	2 MB	2 MB	2 MB	2 MB	Depends on CPU	Depends on CPU
	CPU Type	BGA		BGA		BGA	Socket (LGA 1150)
	Chipset	Integrated		Integrated		Intel® QM77/HM76 Express	Intel® H81 Express
	BIOS	AMI		AMI		AMI	AMI
Memory	Technology	Dual-channel DDR3L 1333 MHz	Dual-channel DDR3L 1066 MHz	Dual-channel DDR3L 1333 MHz	Dual-channel DDR3L 1066 MHz	Dual-channel DDR3/DDR3L 1066/1333/1600MHz	Dual-channel DDR3/DDR3L 1066/1333/1600 MHz
	Max. Capacity	Up to 8GB		Up to 8GB		Up to 16GB	Up to 16GB
	Socket	2 x 204-pin SO-DIMMs		2 x 204-pin SO-DIMMs		2 x 204-pin SO-DIMMs	2 x 204-pin SO-DIMMs
Display	Controller	Intel® HD Graphics		Intel® HD Graphics		Intel® HD Graphics	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM		Shared system memory up to 1.7 GB SDRAM		Shared system memory up to 1.7 GB SDRAM	Shared system memory up to 1.7 GB SDRAM
	LVDS	Daul Channel 24-bit (add chrontel 7511B chipset)		Daul Channel 24-bit (add chrontel 7511B chipset)		Dual channel 18/24-bit	Dual channel 24-bit (add chrontel 7511B chipset)
	VGA	1		1		N/A	1 x rear I/O; 1 x internal
	DVI	N/A		N/A		1 (DVI-I)	N/A
	HDMI	N/A		1		2	N/A
	Multiple Display	2 independent displays		2 independent displays		2 independent displays (SNB CPU only) 3 independent displays (IVB CPU only)	2 independent displays
	Display Mode	VGA up to 1920 x 1200 LVDS up to 1920 x 1200		VGA up to 1920 x 1200 HDMI up to 1920 x 1200 LVDS up to 1920 x 1200		LVDS up to 1920 x 1200 DVI-I up to 1920 x 1200 HDMI up to 1920 x 1200	VGA up to 1920 x 1200 LVDS up to 1920 x 1080
Ethernet	Controller	2 or 1 x Realtek® RTL8111G-CG GbE LAN (depends on SKU)		2 x Intel® i210-AT GbE LAN		1 x Intel® 82579LM GbE LAN PHY 1 x Intel® I210-AT GbE LAN	1 x Realtek® RTL8111-E-VL-CG GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec		Realtek® ALC887 HD Audio Codec		Realtek® ALC887 HD Audio Codec	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866		Fintek F81866		Fintek F81866AD-I	Fintek F81866AD-I
H/W Monitor	Watchdog Timer	256-level Watchdog Timer		256-level Watchdog Timer		256-level Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes		Yes		Yes	Yes
TPM	Controller	Pin header		Pin header		Pin header	Pin header
I/O Interface	USB	8 x USB 2.0 (4 x internal; 4 x rear)		8 x USB 2.0 (4 x internal; 4 x rear) 1 x USB 3.0 (internal)		4 x USB 2.0 (4 x internal) 2 x USB 3.0 (2 x rear)	6 x USB 2.0 (4 x internal; 2 x rear) 2 x USB 3.0 (2 x rear)
	Serial	6 x COM (5 x internal; 1 x rear) COM1: RS-232, 0V/5V/12V COM 2~6: RS232, w/o power		6 x COM (COM1~2: rear; COM3~6: internal) COM1: RS-232/422/485, 0V/5V/12V COM 2~6: RS232, 0V/5V/12V		6 x COM (COM1: rear; COM2~6: internal) COM1~2: RS-232/422/485, 0V/5V/12V COM3~6: RS-232, 0V	6 x COM (internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V (selected by BIOS) COM5~6: RS-232, without power (COM1 & COM2 support WOR)
	Parallel	1 (Pin header)		N/A		N/A	1
	PS/2	1 (Pin header)		1 (Pin header)		1 (pin header)	1
	GPIO	8-bits (4 x GPI, 4 x GPO), 5V		8-bits (4 x GPI, 4 x GPO), 5V		8-bits (4 x GPI; 4 x GPO), 3V/5V	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCIe x16	N/A		N/A		1	N/A
	PCIe x1	1		N/A		N/A	N/A
	PCI	N/A		1		N/A	N/A
	Mini-PCIe	1 x Full-size, mSATA		1 x Full-size, mSATA		2 x Full-size (1 w/ mSATA function, 1 w/ SIM holder)	1 x Full-size, mSATA
Storage	SATA	1 x SATA 2.0		1 x SATA 2.0		2 x SATA 3.0	2 x SATA 3.0
	mSATA	1		1		1	1
Power Supply	DC	DC-in 12V		DC-in 12V/19V/24V		DC-in 12V	DC-in 12V/19V DC-out 12V-2P
	ATX	N/A		ATX-Power 20P		N/A	N/A
Environment	Operating Temperature	0 ~ 60°C		0 ~ 60°C		0 ~ 60°C	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing		10 ~ 90%, non-condensing		10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C		-20 ~ 80°C		-20 ~ 80°C	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing		10 ~ 90%, non-condensing		10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)		170mm x 170mm (Mini-ITX)		170mm x 170mm (Mini-ITX)	170mm x 170mm (Mini-ITX)
	Weight	0.37 Kg		0.37 Kg		0.37 Kg	0.33Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI		FCC, CE, C-Tick, VCCI, BSMI		FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI

NEW

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NEW

Model		MS-98D2	MS-98C8	MS-98C7
		Mini-ITX Mainboard		
Processor	CPU	Intel® Atom™ Processor D2550, Dual Core	3rd Gen Intel® Core™ Mobile Processor (optional)	4th Gen Intel® Desktop H3 Core i7/i5/i3/ Celeron Processor
	Frequency	1.86GHz	Depends on CPU	Depends on CPU
	L2 Cache	1 MB	Depends on CPU	Depends on CPU
	CPU Type	BGA	Socket G2 (rPGA 989)	Socket (LGA 1150)
	Chipset	Intel® NM10 Express	Intel® QM77/HM76 Express	Intel® Q87/H81 Express
	BIOS	AMI	AMI	AMI
Memory	Technology	Single-channel DDR3 1067MHz	Dual-channel DDR3 1600/1333MHz	Dual-channel DDR3/DDR3L 1066/1333/1600MHz
	Max. Capacity	Up to 4 GB	Up to 16GB	Up to 16GB
	Socket	1 x 204-pin SO-DIMM	2 x 204-pin SO-DIMMs	2 x 204-pin SO-DIMMs
Display	Controller	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 759 MB SDRAM	Shared system memory up to 1.7 GB SDRAM	Shared system memory up to 1.7 GB SDRAM
	LVDS	Singlel channel 18/24-bit	Dual channel 18/24-bit	Dual channel 24-bit (add chrontel 7511B chipset)
	VGA	1 x rear I/O; 1 x internal	N/A	1
	DVI	N/A	1 (DVI-I)	N/A
	DisplayPort	N/A	2	2
	Multiple Display	2 independent displays	2 independent displays (SNB CPU only) 3 independent displays (IVB CPU only)	2 independent displays (H81 SKU) 3 independent displays (Q87 SKU)
	Display Mode	VGA up to 1920 x 1200 LVDS up to 1440 x 900	LVDS up to 1920 x 1200 DP up to 2560 x 1600 DVI-I up to 1920 x 1200	LVDS up to 1920 x 1200 VGA up to 1920 x 1200 DP up to 3840 x 2160
Ethernet	Controller	1 x Realtek® RTL8111-E-VL-CG GbE LAN	1 x Intel® 82579 PHY GbE LAN 1 x Intel® I210-AT PCIe GbE LAN	1 x Intel® I217-LM GbE PHY (iAMT 9.0 supported) 1 x Intel® I210-AT PCIe GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec	Realtek® ALC887 HD Audio Codec	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866AD-I	Fintek F81866D	Fintek F81866D
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer
	Smart Fan	N/A	Yes	Yes
TPM	Controller	Pin header	Pin header	Pin header
I/O Interface	USB	7 x USB 2.0 (4 x rear; 3 x internal)	6 x USB 2.0 (4 x rear; 2 x internal) 4 x USB 3.0 (2 x rear; 2 x internal)	Q87: 6 x USB 2.0 (4 x internal; 2 x rear); 4 x USB 3.0 (rear) H81: 6 x USB 2.0 (2 x internal; 4 x rear); 2 x USB 3.0 (rear)
	Serial	6 x COM (internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V (selected by BIOS) COM5~6: RS-232, without power (COM1 & COM2 support WOR)	4 x COM (COM1: rear; COM2~4: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V	5 COM (COM1: rear; COM2~5: internal) COM1: RS-232/422/485, 0V/5V/12V COM2: RS-232, w/ WOR function COM3~5: RS-232, 0V/5V/12V
	Parallel	1	N/A	1 (Pin header)
	PS/2	1	1	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V	8-bits (4 x GPI; 4 x GPO), 5V	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCIe x16	N/A	N/A	1 (up to 75W)
	Mini-PCIe	1 x Full-size	1 x Full-size 1 x Half-size, mSATA	1 x Full-size, mSATA 1 x Half-size
Storage	SATA	2 x SATA 2.0	2 x SATA 3.0 2 x SATA 2.0	Q87: 4 x SATA 3.0 H81: 2 x SATA 3.0; 1 x SATA 2.0
	mSATA	N/A	1	1
Power Supply	DC	DC-in 12V/19V DC-out 12V-2P	DC-in 12V/19V	DC-in 12V
	ATX	N/A	N/A	N/A
Environment	Operating Temperature	0 ~ 60°C	0 ~ 70°C	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C	-20 ~ 80°C	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)	170mm x 170mm (Mini-ITX)	170mm x 170mm (Mini-ITX)
	Weight	0.42Kg	0.35 Kg	0.37 Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI

MSI reserves the right to change the specifications without prior notices.

Model		MS-9899 V1.1	MS-9897 V2.3	MS-9895 V1.5
		Mini-ITX Mainboard		
Processor	CPU	Intel® Core™ i7/i5/i3 Mobile Processor	3rd Gen Intel® Core™ Mobile Processor (optional)	Intel® Atom™ Processor D2550/N2800/ N2600, Dual Core
	Frequency	Depends on CPU	Depends on CPU	1.86GHz/1.6GHz
	L2 Cache	Depends on CPU	Depends on CPU	1MB
	CPU Type	Socket G2 (rPGA 989)	BGA	BGA
	Chipset	Intel® QM77/HM76 Express	Intel® HM76/HM65	Intel® NM10 Express
	BIOS	AMI	AMI	AMI
Memory	Technology	Dual-channel DDR3/DDR3L 1066/1333/1600MHz	Dual-channel DDR3 1066/1333/1600MHz	Single-channel DDR3 1066MHz
	Max. Capacity	Up to 16GB	Up to 8GB	Up to 4 GB (D2550/N2800) Up to 2 GB (N2600)
	Socket	2 x 204-pin SO-DIMMs	2 x 204-pin SO-DIMMs	1x 204-pin SO-DIMM
Display	Controller	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	Shared system memory up to 1.7 GB SDRAM	Shared system memory up to 759 MB SDRAM
	LVDS	Dual channel 24-bit	Dual channel 18/24-bit	2 x LVDS Daul channel 24-bit (add chrontel 7511B chipset) Single channel 18/24-bit
	eDP	1 (Pin header; only for QM77)	N/A	N/A
	VGA	1	N/A	1
	DVI	1 (DVI-D; only for QM77)	1 (DVI-I)	1 (DVI-D)
	HDMI	1 (only for QM77)	1	N/A
	Multiple Display	2 Independent displays (SNB CPU only) 3 Independent displays (IVB CPU only)	2 Independent displays (SNB CPU only) 3 Independent displays (IVB CPU only)	2 independent displays
	Display Mode	LVDS up to 1920 x 1200 eDP up to 1920 x 1200 DVI-D up to 2560 x 1600 VGA up to 2560 x 1600 HDMI up to 2560 x1600	LVDS up to 1920 x 1200 HDMI up to 1920 x 1200 DVI-I up to 1920 x 1200	VGA up to 1920 x 1080 DVI-D up to 2560 x 1200 LVDS up to 1920 x 1080
Ethernet	Controller	1 x Intel® 82579LM GbE LAN PHY iAMT 8.0 (QM77 only) 1 x Intel® 82583V GbE LAN	1 x Intel® 82579LM GbE LAN PHY 1 x Intel® I210AT GbE LAN	2 x Intel® 82574L GbE LAN (D2550/N2800) 1 x Intel® 82574L GbE LAN (N2600)
Audio	Controller	Realtek® ALC887 HD Audio Codec	Realtek® ALC887 HD Audio Codec	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866D	Fintek F81866D	Finteck F81865-I + F81216
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes	Yes	N/A
TPM	Controller	Pin header	Infineon SLB9635TT1.2	Pin header
I/O Interface	USB	4 x USB 3.0 (2 x rear; 2 x internal) 6 x USB 2.0 (4 x rear; 2 x internal)	2 x USB 3.0 (internal; for IVB CPU only) 4 x USB 2.0 (rear)	8 x USB 2.0 (4 x rear; 4 x internal for D2550/ N2800 SKU) 6 x USB 2.0 (2 x Rear, 4 x Internal for N2600 SKU)
	Serial	4 x COM (COM1: rear; COM2~4: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V (no power selection jumper for HM76)	4 x COM (internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V	10 x COM (COM1~2: rear; COM3~10: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~10: RS-232, 0V/5V/12V
	PS/2	1	N/A	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V	8-bits (4 x GPI; 4 x GPO), 3V/5V	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCIe x16	1	N/A	N/A
	PCI	N/A	N/A	1
	Mini-PCIe	1	1 x Full-size 1 x Half-size, mSATA	1 x Full-size, mSATA
Storage	SATA	2 x SATA 3.0; 2 x SATA 2.0	2 x SATA 2.0	2 x SATA 2.0
	CFast	1 (QM77 only)	N/A	N/A
	mSATA	1	1	1
Power Supply	DC	N/A	DC-in 12V/19V	DC-in 12V /19V / 24V (P/N: 919-9895-010 only) DC-in 12V for other P/N
	ATX	ATX-Power 24P, 12V-4P	N/A	N/A
Environment	Operating Temperature	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	0 ~ 95%, non-condensing
	Storage Temperature	-20 ~ 80°C	-20 ~ 80°C	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)	170mm x 170mm (Mini-ITX)	Mini-ITX(170mmX170mm)
	Weight	0.37 kg	0.37 Kg	0.42Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI

Model		MS-9893 V1.2	MS-9887
		Mini-ITX Mainboard	
Processor	CPU	Intel® Atom™ Processor D2550/N2800, Dual Core	Intel® Core™ i7/i5/i3 Mobile Processor
	Frequency	1.86GHz	Depends on CPU
	L2 Cache	1 MB	Depends on CPU
	CPU Type	BGA	Socket G2 (rPGA-989)
	Chipset	Intel® NM10 Express	Intel® QM67 Express (wth iAMT 7.0) Intel® HM65 Express (without iAMT function)
	BIOS	AMI	AMI
Memory	Technology	Single-channel DDR3 1067MHz	Dual-channel DDR3 1066/1333/1600MHz
	Max. Capacity	Up to 4 GB	Up to 16 GB
	Socket	1 x 204-pin SO-DIMM	2 x 204-pin SO-DIMMs
Display	Controller	Intel® HD Graphics	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 759 MB SDRAM	Shared system memory up to 1.7 GB SDRAM
	LVDS	Singlel channel 18/24-bit	Dual channel 18/24-bit
	VGA	1 x rear I/O	1
	DVI	N/A	2 (DVI-D)
	HDMI	1	1
	Multiple Display	2 independent displays	2 independent displays
	Display Mode	VGA up to 1920 x 1200 LVDS up to 1440 x 900 HDMI up to 1920 x 1200	LVDS up to 1920 x1080 VGA up to 1920 x 1080 DVI-D up to 2560 x 1600 HDMI up to 1920 x 1200
Ethernet	Controller	2 x Realtek® RTL8111-E-VL-CG GbE LAN	1 x Intel® 82579LM GbE LAN PHY 1 x Intel® 82574L GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Finteck F81865-I	Fintek F71889AD
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer
	Smart Fan	N/A	Yes
TPM	Controller	Pin header	Infineon SLB9635TT1.2
I/O Interface	USB	6 x USB 2.0 (2 x internal, 4 x rear I/O)	8 x USB 2.0 (4 x rear; 4 x internal)
	Serial	6 x COM (COM1&6: rear; COM2~5: internal) COM1: RS-232/422/485, 0V/5V/12V, with WOR function COM2~5: RS-232 pin header, 0V/5V/12V COM6: RS-232, 0V/5V/12V	4 x COM (internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V
	Parallel	1	N/A
	PS/2	1	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCI	1	1
	Mini-PCIe	1 x Full-size, mSATA	1 x Full-size
Storage	SATA	2 x SATA 2.0	2 x SATA 3.0; 2 x SATA 2.0 (support RAID 0, 1, 5, 10)
	CFast	N/A	1
	mSATA	1	N/A
Power Supply	DC	DC-in 12V for D2550/N2800 SKU	DC-in 12V
	ATX	ATX-Power 20P for D2550 SKU only	N/A
Environment	Operating Temperature	0 ~ 60°C	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)	170mm x 170mm (Mini-ITX)
	Weight	0.42Kg	0.32 kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	FCC Class A, CE, C-Tick, VCCI, BSMI

MSI reserves the right to change the specifications without prior notices.

Model		MS-9877	MS-9866	MS-9834
		Mini-ITX Mainboard		
Processor	CPU	Intel® Atom™ Processor D525, Dual Core	Intel® Atom™ Processor N270	Intel® Core™2 Duo, Celeron™ Moible Processor
	Frequency	1.8GHz	1.6 GHz	Depends on CPU
	L2 Cache	1MB	512K	Depends on CPU
	CPU Type	BGA	BGA	Socket P
	Chipset	Intel® ICH9R	Intel® 945GSE + ICH7M	Intel® GM45 + ICH9M-E
	BIOS	AMI	AMI	AMI
Memory	Technology	Dual-channel DDR3 800MHz	Single-channel DDR2 400/533 MHz	Dual-channel DDR3 800/1066MHz
	Max. Capacity	Up to 4GB	Up to 2GB	Up to 4 GB
	Socket	2 x 204-pin SO-DIMMs	1 x 200-pin SO-DIMM	2 x 204-pin SO-DIMMs
Display	Controller	Intel® GMA3150 Graphics	Intel® GMA950 Graphics	Intel® GMA4500 Graphics
	Graphic Memory	Shared system memory up to 384 MB SDRAM	Shared system memory up to 256 MB SDRAM	Shared system memory up to 1.7 GB SDRAM
	LVDS	N/A	Daul channel 24-bit	Dual channel 18/24-bit
	VGA	1	1	N/A
	DVI	N/A	N/A	1 (DVI-I)
	HDMI	N/A	N/A	1
	Multiple Display	Single display	Dual display	2 independent displays
	Display Mode	VGA up to 1920 x 1200	VGA up to 1920 x 1080 LVDS up to 1920 x 1200	LVDS up to 1920 x1080 DVI-I up to 1920 x 1080 HDMI up to 1920 x 1080
Ethernet	Controller	4 x Intel® 82574L PCIe LAN (optional by-pass function for 2 LAN)	2 x Realtek® RTL8111DL GbE LAN	1 x Intel® 82567LM GbE LAN PHY 1 x Intel® 82574L GbE LAN
Audio	Controller	N/A	Realtek® ALC662 HD Audio Codec	Realtek® ALC888 HD Audio Codec
Super I/O	Controller	Fintek F71882FG	Fintek F81865	Winbond W83627 DHG
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes	Yes	Yes
TPM	Controller	N/A	N/A	Infineon SLB9635TT1.2
I/O Interface	USB	6 x USB 2.0 (2 x rear; 4 x internal)	6 x USB 2.0 (2 x internal; 4 x rear)	8 x USB 2.0 (4 x rear; 4 x internal)
	Serial	2 x COM (COM1: rear; COM2: internal) COM1: RS-232/422/485, 0V COM2: RS-232, 0V	10 x COM (COM1: rear; COM2~10: internal) COM1: RS-232/422/485 COM 2~10: RS232	6 x COM (COM1: rear; COM2~5: internal) COM1: RS-232, 0V/5V/12V COM2~5: RS-232
	Parallel	N/A	1 (Pin header)	N/A
	PS/2	N/A	2 (1 x rear; 1 x pin header)	N/A
	GPIO	8-bits (4 x GPI; 4 x GPO), 3V/5V	8-bits (4 x GPI; 4 x GPO), 3.3V /5V	N/A
Expansion Slot	PCIe x1	1	N/A	N/A
	PCI	2	1	1
	Mini-PCIe	1 x Full-size	1 x Full-size	1 x Full-size
Storage	SATA	2 x SATA 2.0	2 x SATA 2.0	4 x SATA 2.0
	IDE	N/A	1	N/A
Power Supply	DC	DC-in 12V/19V/24V	DC-in 12V	DC-in 19V
	ATX	N/A	N/A	N/A
Environment	Operating Temperature	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C	-20 ~ 80°C	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)	170mm x 170mm (Mini-ITX)	170mm x 170mm (Mini-ITX)
	Weight	0.28 Kg	0.4 Kg	0.30 kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI

Model		MS-9830-A	MS-9830-C	MS-9820
		Mini-ITX Mainboard		
Processor	CPU	Intel® Atom™ Processor N270	Intel® Atom™ Processor N270	Intel® Core™ Extreme/Quad/Duo Celeron™ Mobile Processor
	Frequency	1.6 GHz	1.6 GHz	Depends on CPU
	L2 Cache	512 KB	512 KB	Depends on CPU
	CPU Type	BGA	BGA	Socket LGA 775
	Chipset	Intel® 945GSE + ICH7M	Intel® 945GSE + ICH7M	Intel®Q35 + ICH9DO
	BIOS	AMI	AMI	AMI
Memory	Technology	Single-channel DDR2 400/533MHz	Single-channel DDR2 400/533MHz	Dual-channel DDR2 667/800MHz
	Max. Capacity	Up to 1 GB	Up to 1 GB	Up to 4GB
	Socket	1 x 200-pin SO-DIMM	1 x 200-pin SO-DIMM	2 x 240-pin DIMMs
Display	Controller	Intel® GMA950 Graphics	Intel® GMA950 Graphics	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 256 MB SDRAM	Shared system memory up to 256 MB SDRAM	Shared system memory up to 384 MB SDRAM
	LVDS	N/A	Dual channel 18/24-bit	N/A
	VGA	1	1	1
	DVI	1 (DVI-D)	N/A	N/A
	Multiple Display	Dual display	Dual display	Single display
	Display Mode	VGA up to 1920 x 1080 DVI-I up to 1920 x 1200	VGA up to 1920 x 1080 LVDS up to 1920 x 1200	VGA up to 2560 x 1600
Ethernet	Controller	2 x Intel® 82574L GbE LAN	1 x Intel® 82574L GbE LAN	1 X Intel® 82566DM GbE LAN 1 X Intel® 82573L GbE LAN
Audio	Controller	Realtek® ALC888 HD Audio Codec	Realtek® ALC888 HD Audio Codec	Realtek® ALC888 HD Audio Codec
Super I/O	Controller	Fintek F71882FG	Fintek F71882FG	Fintek F71822FG
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes	Yes	Yes
TPM	Controller	N/A	N/A	Infineon SLB9635TT1.2
I/O Interface	USB	6 x USB 2.0 (2 x internal)	6 x USB 2.0 (2 x internal)	8 x USB 2.0 (4 x rear; 4 x internal)
	Serial	6 x COM (COM1&2: rear; COM3~6: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~6: RS-232, 0V/5V/12V	5 x COM (COM1: rear; COM2~5: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~5: RS-232, 0V/5V/12V	2 x COM (COM1: rear; COM2: internal) COM1~2: RS-232
	Parallel	1	1	N/A
	PS/2	N/A	N/A	1
Expansion Slot	PCIe x16	N/A	N/A	1
	PCI	1	1	N/A
	Mini-PCIe	1 x Full-size	1 x Full-size	1 x Full-size
Storage	SATA	2 x SATA 2.0	2 x SATA 2.0	4 x SATA 2.0
	IDE	1	1	N/A
Power Supply	DC	N/A	DC-in 12V	N/A
	ATX	ATX-Power 20P	N/A	ATX-Power 20P, 12V-4P
Environment	Operating Temperature	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C	-20 ~ 80°C	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)	170mm x 170mm (Mini-ITX)	170mm x 170mm (Mini-ITX)
	Weight	0.43 kg	0.37 kg	0.42 Kg
Certification	EMC	FCC Class B, CE, C-Tick, VCCI, BSMI	FCC Class B, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI

MSI reserves the right to change the specifications without prior notices.

Model		MS-9818	MS-9642-GME2	MS-9642-GME3
		Mini-ITX Mainboard		
Processor	CPU	Intel® Core™ Extreme/Quad/Duo Celeron™ Mobile Processor	Intel® Pentium M, Celeron M Processor	Intel® Pentium M, Celeron M Processor
	Frequency	Depends on CPU	Depends on CPU	N/A
	L2 Cache	Depends on CPU	Depends on CPU	N/A
	CPU Type	Socket P	Socket (mPGA 478)	Socket (mPGA 478)
	Chipset	Intel® GM45 + ICH9M-E	Intel® 945GME + ICH7M	Intel® 945GME + ICH7M
	BIOS	AMI	Award	Award
Memory	Technology	Dual-channel DDR2 533/667/800MHz	Single-channel DDR2 533/667MHz	Dual-channel DDR2 533/667MHz
	Max. Capacity	Up to 4GB	Up to 2GB	Up to 2GB
	Socket	2 x 200-pin SO-DIMMs	1 x 240-pin DIMM	1 x 240-pin DIMM
Display	Controller	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	Shared system memory up to 256 MB SDRAM	Shared system memory up to 256 MB SDRAM
	LVDS	Dual channel 18/24-bit	Single channel 24-bit	Single channel 24-bit
	VGA	1	1	1
	DVI	1 (DVI-D)	N/A	N/A
	HDMI	1	N/A	N/A
	Multiple Display	2 independent displays	2 independent displays	2 independent displays
	Display Mode	VGA up to 1920 x 1080 DVI up to 1920 x 1080 HDMI up to 1920 x 1080	VGA up to 1920 x 1080 LVDS up to 1920 x 1200	VGA up to 1920 x 1080 LVDS up to 1920 x 1200
Ethernet	Controller	1 x Intel® 82567LM GbE LAN 1 x Intel® 82574 GbE LAN	3 x Intel® 82573L GbE LAN	2 X Intel® 82573L GbE LAN
Audio	Controller	Realtek® ALC888 HD Audio Codec	Realtek® ALC888 HD Audio Codec	Realtek® ALC888 HD Audio Codec
Super I/O	Controller	Winbond 83627DHG	Winbond W83627EHG	Winbond W83627EHG
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes	Yes	Yes
TPM	Controller	Pin header	Pin header	Pin header
I/O Interface	USB	8 x USB 2.0 (4 x rear; 4 x internal)	4 x USB 2.0 (2 x rear; 2 x internal)	4 x USB 2.0 (2 x rear; 2 x internal)
	Serial	5 x COM (COM1: rear; COM2~5: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~5: RS-232	5 x COM (COM1: rear; COM2~5: internal) COM1: RS-232 COM2~5: RS-232/422/485, 0V/5V/12V	5 x COM (COM1: rear; COM2~5: internal) COM1: RS-232 COM2~5: RS-232/422/485, 0V/5V/12V
	Parallel	N/A	1	1
	PS/2	1	1	1
	GPIO	N/A	16-bits (8 x GPI; 8 x GPO), 5V	16-bits (8 x GPI; 8 x GPO), 5V
Expansion Slot	PCIe x16	N/A	1	1
	PCIe x1	1	1	1
	PCI	1	1	1
	Mini-PCIe	1 x Full-size	N/A	N/A
Storage	SATA	4 x SATA 2.0	2 x SATA 2.0	2 x SATA 2.0
	IDE	1	1	1
	CompactFlash	1	N/A	N/A
Power Supply	DC	N/A	N/A	N/A
	ATX	ATX-Power 20P, 12V-4P	ATX-Power 20P, 12V-4P	ATX-Power 20P, 12V-4P
Environment	Operating Temperature	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C	-20 ~ 80°C	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)	170mm x 170mm (Mini-ITX)	170mm x 170mm (Mini-ITX)
	Weight	0.58 Kg	0.36 Kg	0.30 Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI

Model		MS-98D6	MS-98B5	MS-98A9
		Micro-ATX Mainboard	ATX Mainboard	
Processor	CPU	4th Gen Intel® Desktop H3 Core i7/i5/i3/ Celeron Processor	4th Gen Intel® Core™ i7/i5/i3/Pentium/Celeron Processor	Intel® Core™ i7/i5/i3/Pentium/Celeron Processor
	Frequency	Depends on CPU	Depends on CPU	Depends on CPU
	L2 Cache	Depends on CPU	Depends on CPU	Depends on CPU
	CPU Type	Socket (LGA 1150)	Socket (LGA 1150)	Socket (LGA 1150)
	Chipset	Intel® Q87 Express	Intel® Q87/H81 Express	Intel® Q77 Express
	BIOS	AMI	AMI	AMI
Memory	Technology	Dual-channel DDR3 1066/1333/1600MHz	Dual-channel DDR3/DDR3L 1333/1600MHz	Dual-channel DDR3 1333/1600MHz
	Max. Capacity	Up to 32 GB	Up to 32GB	Up to 32GB
	Socket	4 x 240-pin Long-DIMMs	4 x 240-pin DIMMs	4 x 240-pin DIMMs
Display	Controller	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	Shared system memory up to 1.7 GB SDRAM	Shared system memory up to 1.7 GB SDRAM
	VGA	N/A	N/A	1
	DVI	1 (DVI-I)	1 (DVI-I)	1 (DVI-D)
	DisplayPort	2	1	1
	Multiple Display	3 independent displays	2 independent displays (H81 SKU) 3 independent displays (Q87 SKU)	2 independent displays (SNB CPU only) 3 independent displays (IVB CPU only)
	Display Mode	DP up to 3840 x 2160 DVI up to 1920 x 1200	VGA up to 1920 x 1080 DVI-D up to 2560 x 1600 DP up to 2560 x 1600	VGA up to 1920 x 1080 DVI-D up to 1920 x 1200 DP up to 2560 x 1600 HDMI up to 1920 x 1200
Ethernet	Controller	1 x Intel® I217-LM GbE-PHY 1 x Intel® I210-AT PCIe GbE LAN	1 x Intel® I217-LM GbE LAN PHY 1 x Intel® I210-AT GbE LAN	1 x Intel® 82579LM GbE LAN PHY 1 x Intel® 82583V GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec	Realtek® ALC887 HD Audio Codec	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866AD-I + F81216AD	Fintek F81866AD-I	Fintek F81866
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes	Yes	Yes
TPM	Controller	Pin header	Pin header	Pin header
I/O Interface	USB	8 x USB 2.0 (6 x rear; 2 x internal) 4 x USB 3.0 (4 x rear)	8 x USB 2.0 (Q87: 2 x rear; 6 x internal; H81: 4 x rear; 4 x internal) 4 x USB 3.0 (Q87: 4 x rear; H81: 2 x rear)	4 x USB 3.0 (rear) 8 x USB 2.0 (2 x rear; 6 x internal)
	Serial	10 x COM (internal) COM1~COM4: RS-232, 0V/5V/12V COM5: RS-232/422/485, 0V/5V/12V COM6: RS-232/422/485, without power COM7~COM10: RS-232, 0V/5V/12V (COM1 & COM2 support WOR)	6 x COM (COM1~2: rear; COM3~6: internal) COM1~2: RS-232/422/485, 0V/5V/12V COM3~6: RS-232, 0V/5V/12V	6 x COM ports (COM1: rear; COM2~6: internal) COM1&2: RS-232/422/485, 0V/5V/12V COM3~6: RS-232, 0V/5V/12V
	Parallel	1	Yes	1
	PS/2	1	1 x PS/2 port by Y-cable for keyboard and mouse	1
	GPIO	8-bits (4 x GPI, 4 x GPO), 5V	8-bits (4 x GPI; 4 x GPO), 5V	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCIe x16	1	1	1
	PCIe x4	1*PCIe x8 (signal is x4)	N/A	1
	PCIe x1	N/A	3	N/A
	PCI	2	3	5
	Mini-PCIe	1 x Full-size, mSATA	2 x Full-size (Q87 only)	1 x Full-size
Storage	SATA	4 x SATA 3.0	6 x SATA 3.0 (H81 SKU only support 2 x SATA 2.0, 2 x SATA 3.0) (Q87 SKU support RAID 0/1/5/10)	2 x SATA 3.0; 3 x SATA 2.0 (support RAID 0, 1, 5, 10)
	mSATA	1	N/A	1
Power Supply	DC	N/A	N/A	N/A
	ATX	ATX-Power 24P, 12V-4P	ATX-Power 24P, 12V-4P	ATX-Power 24P, 12V-4P
Environment	Operating Temperature	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C	-20 ~ 80°C	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing	10 ~ 90%, non-condensing
Form Factor	Dimensions	244 mm x 244 mm (uATX)	305mm x 244mm (ATX)	305mm x 244mm (ATX)
	Weight	0.73 Kg	0.70 kg	0.75 kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	FCC, CE, C-Tick, VCCI, BSMI (Class A)	FCC Class A, CE, C-Tick, VCCI, BSMI

*1 x ISA (optional)

MSI reserves the right to change the specifications without prior notices.

MS-9A70

HMI Panel PC with Ultra Low Power Intel® Atom™ Fanless Solution

Features

- Ultra low power with fanless design
- 10.4” TFT LCD with 5-wire resistive touch panel
- Flexible storage interfaces (HDD/SSD/mSATA)
- Support wide voltage DC-in 9~36V
- Open-frame panel PC or with bezel (optional)
- IP65 front panel for water-proof applications

Ordering Information

Part Number	Description
Coming soon	

Packing List

Part Number	Description
Coming soon	

Preliminary

Specifications

Display	LCD Size	10.4"
	Resolution	800 x 600
	Brightness (cd/m^2)	230
	Contrast Ratio	500:1
	Support Colors	16.2M/262K
	Pixel Pitch (H/Vmm)	0.264x0.264
	Viewing Angle	H: 140~160 degree V: 110~130 degree
Touch Panel		5-wire resistive touch panel
System Processor	CPU	Intel® Atom™ Processor D2550, Dual Core
	Frequency	1.86GHz (Dual Core)
	L2 Cache	1MB
	CPU Type	BGA
	Chipset	Intel® NM10 Express
	BIOS	AMI
Memory	Technology	Single-channel DDR3 SO-DIMM 1066MHz
	Max. Capacity	Up to 4GB
	Socket	1 x 204-pin SO-DIMM
Graphic	Controller	Intel® GMA3650 Graphics
	Graphic Memory	Shared system memory up to 759 MB SDRAM
	Multiple Display	2 independent displays
	Display Interface	DVI-I up to 1920 x 1200
Ethernet	Controller	2 x Intel® I210-AT GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
Expansion Slot	Mini-PCIe	2 x Full-size (one with SIM holder)
Storage	SATA	1 x 2.5" HDD/SSD
	mSATA	1 (shared with Mini-PCIe)
I/O Interface	RJ-45	2
	Audio	N/A
	USB	4 x USB 2.0
	Serial	1 x RS-232/422/485; 3 x RS-232
	DVI	1 (DVI-I)
	Antenna	2 openings reserved for antennas
Power Supply	DC Input	DC-in 9~36V Wide-Range
	AC Input	N/A
Environment	Operating Temperature	0~45°C (HDD) 0~50°C (SSD or mSATA)
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 70°C
	Storage Humidity	10 ~ 90%, non-condensing
	Vibration	Operating, 0.25 Grms, 5-300 Hz, 3 aes
	Shock	Operating, 3 G, half sine 11 ms
Physical Characteristics	Housing	SECC/SGCC, aluminum
	Dimensions	285.0mm x 225.0mm x 55.5mm
	Weight	2.5 kg (without bezel)
	Mounting	VESA mount
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI
	Safety	UL, TUV, CB
Software Platform	OS Support	Windows 7 (32-bit), Windows XP (32-bit)

MS-9A61-HM76

15" High-performance HMI Panel PC with Intel® Mainstream Mobile CPU

TAIWAN EXCELLENCE 2013

Features

- 3rd Gen Intel® Core™ Mobile processor (Max. TDP: 35W)
- 15" TFT LCD with 5-wire resistive touch panel
- Flexible storage interfaces (HDD/SSD/mSATA/SATA DOM)
- Support DC-in 12V
- Open-frame panel PC or with bezel (optional)
- IP65 front panel for water-proof applications

Ordering Information

Part Number	Description
Coming soon	

Packing List

Part Number	Description
Coming soon	

Preliminary

Specifications

		MS-9A61-HM76-FS	MS-9A61-HM76-BS
Display	LCD Size	15"	
	Resolution	1024x768	
	Brightness (cd/m²)	250	
	Contrast Ratio	700:1	
	Support Colors	16.2M	
	Pixel Pitch (H/Vmm)	0.297x0.297	
	Viewing Angle	H: 140~160 degree V: 100~120 degree	
Touch Panel		5-wire resistive touch panel	
System Processor	CPU	3rd Gen Intel® Core™ Mobile Processor (Max. TDP: 35W)	
	Frequency	Up to 3.6 GHz	
	L2 Cache	Up to 6MB	
	CPU Type	Socket G2 (rPGA 989)	
	Chipset	Intel® HM76 Express	
	BIOS	AMI	
Memory	Technology	Dual-channel DDR3/DDR3L 1066/1333/1600MHz	
	Max. Capacity	Up to 16GB	
	Socket	2 x 204-pin SO-DIMMs	
Graphic	Controller	Intel® HD Graphics	
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	
	Multiple Display	3 independent displays	
	Display Interface	DVI-I up to 2560 x 1600 DP up to 2560 x 1600	
Ethernet	Controller	1 x Intel® 82579 PHY LAN 1 x Intel® I210-AT PCIe LAN	
Audio	Controller	Realtek® ALC887 HD Audio Codec	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	Yes	
Expansion Slot	Mini-PCIe	2 x Full-size	
Storage	SATA	320G 2.5" HDD	
	mSATA	1 (shared with Mini-PCIe)	
I/O Interface	RJ-45	2	
	Audio	1 x Line-out, 1 x Line-in, 1 x Mic-in	
	USB	4 x USB 2.0 2 x USB 3.0	
	Serial	5 x COM COM1: RS-232/422/485 (0V/5V/12V) COM 2~5: RS-232 (0V/5V/12V)	
	PS/2	1	
	DVI	1 (DVI-I)	
	DisplayPort	2	
	Antenna	3 openings reserved for antennas	
Power Supply	DC Input	DC-in 12V pluggable connectors with latch (GND, V-, V+)	
	AC Input	Optional 84W external AC-DC adapter for AC input	
Environment	Operating Temperature	0~45°C (HDD) 0~50°C (SSD or mSATA)	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20°C ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
	Vibration	Operating, 0.25 Grms, 5-300 Hz, 3 aes	
	Shock	Operating, 3 G, half sine 11 ms	
Physical Characteristics	Housing	SGCC, open frame	SGCC, aluminum
	Dimensions	380.2mm x 290mm x 78mm	410mm x 340mm x 79.78mm
	Weight	4.9 kg (without bezel)	5.6 Kg (with bezel)
	Mounting	VESA 75/100	
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	
	Safety	TUV, CB	
Software Platform	OS Support	Windows 8, Windows 7	

MSI reserves the right to change the specifications without prior notices.

MS-9A61-D2550

15" Fanless HMI Panel PC with Intel® Mainstream Mobile CPU

TAIWAN EXCELLENCE 2013

Features

- Intel® mainstream mobile CPU
- 15" TFT LCD with 5-wire resistive touch panel
- Flexible storage interfaces (HDD/SSD/mSATA/SATA DOM)
- Fanless design with excellent ventilation
- Support DC-in 12V
- Open-frame panel PC or with bezel (optional)
- IP65 front panel for water-proof applications

Ordering Information

Part Number	Description
Coming soon	

Packing List

Part Number	Description
Coming soon	

Coming Soon

Specifications

		MS-9A61-D2550-FS	MS-9A61-D2550-BS
Display	LCD Size	15"	
	Resolution	1024x768	
	Brightness (cd/m²)	250	
	Contrast Ratio	700:1	
	Support Colors	16.2M	
	Pixel Pitch (H/Vmm)	0.297x0.297	
	Viewing Angle	H: 140~160 degree V: 100~120 degree	
Touch Panel		5-wire resistive touch panel	
System Processor	CPU	Intel® Atom™ Processor D2550, Dual Core	
	Frequency	1.86 GHz	
	L2 Cache	1MB	
	CPU Type	BGA	
	Chipset	Intel® NM10 Express	
	BIOS	AMI	
Memory	Technology	Single-channel DDR3 1066MHz	
	Max. Capacity	Up to 4GB	
	Socket	1 x 204-pin SO-DIMM	
Graphic	Controller	Intel® GMA3650 Graphics	
	Graphic Memory	Shared system memory up to 759 MB SDRAM	
	Multiple Display	2 independent displays	
	Display Interface	HDMI up to 1920 x 1200 VGA up to 1920 x 1200	
Ethernet	Controller	2 x Realtek® RTL8111E GbE LAN	
Audio	Controller	Realtek® ALC887 HD Audio Codec	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	N/A	
Expansion Slot	Mini-PCIe	1 (optional for WiFi module)	
Storage	SATA	320G 2.5" HDD	
	mSATA	1 (shared with Mini-PCIe)	
I/O Interface	RJ-45	2	
	Audio	1 x Line-out, 1 x Line-in, 1 x Mic-in	
	USB	4 x USB 2.0	
	Serial	5 x COM COM1: RS-232/422/485 (0V/5V/12V) COM 2~5: RS-232 (0V/5V/12V)	
	PS/2	2	
	DVI	1 (DVI-D)	
	VGA	1	
	Antenna	3 openings reserved for antennas	
Power Supply	DC Input	DC-in 12V pluggable connectors with latch (GND, V-, V+)	
	AC Input	Optional 84W external AC-DC adapter for AC input	
Environment	Operating Temperature	0~45°C (HDD) 0~50°C (SSD or mSATA)	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20°C ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
	Vibration	Operating, 0.25 Grms, 5-300 Hz, 3 aes	
	Shock	Operating, 3 G, half sine 11 ms	
Physical Characteristics	Housing	SGCC, open frame	SGCC, aluminum
	Dimensions	380.2mm x 290mm x 78mm	410mm x 340mm x 79.78mm
	Weight	4.9 kg (without bezel)	5.6 Kg (with bezel)
	Mounting	VESA 75/100	
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	
	Safety	TUV, CB	
Software Platform	OS Support	Windows 7, Windows XP	

MS-9A62-HM76

17" High-performance HMI Panel PC with Intel® Mainstream Mobile CPU

Preliminary

TAIWAN EXCELLENCE 2013

Features

- 3rd Gen Intel® Core™ Mobile processor (Max. TDP: 35W)
- 17" TFT LCD with 5-wire resistive touch panel
- Flexible storage interfaces (HDD/SSD/mSATA/SATA DOM)
- Support DC-in 12V
- Open-frame panel PC or with bezel (optional)
- IP65 front panel for water-proof applications

Ordering Information

Part Number	Description
Coming soon	

Packing List

Part Number	Description
Coming soon	

Specifications

		MS-9A62-HM76-FS	MS-9A62-HM76-BS
Display	LCD Size	17"	
	Resolution	1280x1024	
	Brightness (cd/m^2)	350	
	Contrast Ratio	1000:1	
	Support Colors	16.7M	
	Pixel Pitch (H/Vmm)	0.264x0.264	
	Viewing Angle	H: 140~160 degree V: 140~160 degree	
Touch Panel		5-wire resistive touch panel	
System Processor	CPU	3rd Gen Intel® Core™ Mobile Processor (Max. TDP: 35W)	
	Frequency	Up to 3.6 GHz	
	L2 Cache	Up to 6MB	
	CPU Type	Socket G2 (rPGA 989)	
	Chipset	Intel® HM76 Express	
	BIOS	AMI	
Memory	Technology	Dual-channel DDR3/DDR3L 1066/1333/1600MHz	
	Max. Capacity	Up to 16GB	
	Socket	2 x 204-pin SO-DIMMs	
Graphic	Controller	Intel® HD Graphics	
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	
	Multiple Display	3 independent displays	
	Display Interface	DVI-I up to 2560 x 1600 DP up to 2560 x 1600	
Ethernet	Controller	1 x Intel® 82579 PHY LAN 1 x Intel® I210-AT PCIe LAN	
Audio	Controller	Realtek® ALC887 HD Audio Codec	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	Yes	
Expansion Slot	Mini-PCIe	2 x Full-size	
Storage	SATA	320G 2.5" HDD	
	mSATA	1 (shared with Mini-PCIe)	
I/O Interface	RJ-45	2	
	Audio	1 x Line-out, 1 x Line-in, 1 x Mic-in	
	USB	4 x USB 2.0 2 x USB 3.0	
	Serial	5 x COM COM1: RS-232/422/485 (0V/5V/12V) COM 2~5: RS-232 (0V/5V/12V)	
	PS/2	1	
	DVI	1 (DVI-I)	
	DisplayPort	2	
	Antenna	3 openings reserved for antennas	
Power Supply	DC Input	DC-in 12V pluggable connectors with latch (GND, V-, V+)	
	AC Input	Optional 84W external AC-DC adapter for AC input	
Environment	Operating Temperature	0~45°C (HDD) 0~50°C (SSD or mSATA)	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20°C ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
	Vibration	Operating, 0.25 Grms, 5-300 Hz, 3 aes	
	Shock	Operating, 3 G, half sine 11 ms	
Physical Characteristics	Housing	SGCC, open frame	SGCC, aluminum
	Dimensions	410.2mm x 337mm x 85.6mm	483mm x 399mm x 87.43mm
	Weight	6.5 kg (without bezel)	7.6 Kg (with bezel)
	Mounting	VESA 75/100	
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	
	Safety	TUV, CB	
Software Platform	OS Support	Windows 8, Windows 7	

MSI reserves the right to change the specifications without prior notices.

MS-9A62-D2550

17" Fanless HMI Panel PC with Intel® Mainstream Mobile CPU

Coming Soon

TAIWAN EXCELLENCE 2013

Features

- Intel® mainstream mobile CPU
- 17" TFT LCD with 5-wire resistive touch panel
- Flexible storage interfaces (HDD/SSD/mSATA/SATA DOM)
- Fanless design with excellent ventilation
- Support DC-in 12V
- Open-frame panel PC or with bezel (optional)
- IP65 front panel for water-proof applications

Ordering Information

Part Number	Description
Coming soon	

Packing List

Part Number	Description
Coming soon	

Specifications

		MS-9A62-D2550-FS	MS-9A62-D2550-BS
Display	LCD Size	17"	
	Resolution	1280x1024	
	Brightness (cd/m^2)	350	
	Contrast Ratio	1000:1	
	Support Colors	16.7M	
	Pixel Pitch (H/Vmm)	0.264x0.264	
	Viewing Angle	H: 140~160 degree V: 140~160 degree	
Touch Panel		5-wire resistive touch panel	
System Processor	CPU	Intel® Atom™ Processor D2550, Dual Core	
	Frequency	1.86 GHz	
	L2 Cache	1MB	
	CPU Type	BGA	
	Chipset	Intel® NM10 Express	
	BIOS	AMI	
Memory	Technology	Single-channel DDR3 1066MHz	
	Max. Capacity	Up to 4GB	
	Socket	1 x 204-pin SO-DIMM	
Graphic	Controller	Intel® GMA3650 Graphics	
	Graphic Memory	Shared system memory up to 759 MB SDRAM	
	Multiple Display	2 independent displays	
	Display Interface	HDMI up to 1920 x 1200 VGA up to 1920 x 1200	
Ethernet	Controller	2 x Intel® 82574L GbE LAN	
Audio	Controller	Realtek® ALC887 HD Audio Codec	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	N/A	
Expansion Slot	Mini-PCIe	1 (optional for WiFi module)	
Storage	SATA	320G 2.5" HDD	
	mSATA	1 (shared with Mini-PCIe)	
I/O Interface	RJ-45	2	
	Audio	1 x Line-out, 1 x Line-in, 1 x Mic-in	
	USB	4 x USB 2.0	
	Serial	5 x COM COM1: RS-232/422/485 (0V/5V/12V) COM 2~5: RS-232 (0V/5V/12V)	
	PS/2	2	
	DVI	1 (DVI-D)	
	VGA	1	
	Antenna	3 openings reserved for antennas	
Power Supply	DC Input	DC-in 12V pluggable connectors with latch (GND, V-, V+)	
	AC Input	Optional 84W external AC-DC adapter for AC input	
Environment	Operating Temperature	0~45°C (HDD) 0~50°C (SSD or mSATA)	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20°C ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
	Vibration	Operating, 0.25 Grms, 5-300 Hz, 3 aes	
	Shock	Operating, 3 G, half sine 11 ms	
Physical Characteristics	Housing	SGCC, open frame	SGCC, aluminum
	Dimensions	410.2mm x 337mm x 85.6mm	483mm x 399mm x 87.43mm
	Weight	6.5 kg (without bezel)	7.6 Kg (with bezel)
	Mounting	VESA 75/100	
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	
	Safety	TUV, CB	
Software Platform	OS Support	Windows 7, Windows XP	

MS-9A63-HM76

19" High-performance HMI Panel PC with Intel® Mainstream Mobile CPU

Preliminary

TAIWAN EXCELLENCE 2013

Features

- 3rd Gen Intel® Core™ Mobile processor (Max. TDP: 35W)
- 19" TFT LCD with 5-wire resistive touch panel
- Flexible storage interfaces (HDD/SSD/mSATA/SATA DOM)
- Support DC-in 12V
- Open-frame panel PC or with bezel (optional)
- IP65 front panel for water-proof applications

Ordering Information

Part Number	Description
Coming soon	

Packing List

Part Number	Description
Coming soon	

Specifications

		MS-9A63-HM76-FS	MS-9A63-HM76-BS
Display	LCD Size	19"	
	Resolution	1280x1024	
	Brightness (cd/m^2)	350	
	Contrast Ratio	1000:1	
	Support Colors	16.7M	
	Pixel Pitch (H/Vmm)	0.294x0.294	
	Viewing Angle	H: 150~170 degree V: 140~160 degree	
Touch Panel		5-wire resistive touch panel	
System Processor	CPU	3rd Gen Intel® Core™ Mobile Processor (Max. TDP: 35W)	
	Frequency	Up to 3.6 GHz	
	L2 Cache	Up to 6MB	
	CPU Type	Socket G2 (rPGA 989)	
	Chipset	Intel® HM76 Express	
	BIOS	AMI	
Memory	Technology	Dual-channel DDR3/DDR3L 1066/1333/1600MHz	
	Max. Capacity	Up to 16GB	
	Socket	2 x 204-pin SO-DIMMs	
Graphic	Controller	Intel® HD Graphics	
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	
	Multiple Display	3 independent displays	
	Display Interface	DVI-I up to 2560 x 1600 DP up to 2560 x 1600	
Ethernet	Controller	1 x Intel® 82579 PHY LAN 1 x Intel® I210-AT PCIe LAN	
Audio	Controller	Realtek® ALC887 HD Audio Codec	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	Yes	
Expansion Slot	Mini-PCIe	2 x Full-size	
Storage	SATA	320G 2.5" HDD	
	mSATA	1 (shared with Mini-PCIe)	
I/O Interface	RJ-45	2	
	Audio	1 x Line-out, 1 x Line-in, 1 x Mic-in	
	USB	4 x USB 2.0 2 x USB 3.0	
	Serial	5 x COM COM1: RS-232/422/485 (0V/5V/12V) COM 2~5: RS-232 (0V/5V/12V)	
	PS/2	1	
	DVI	1 (DVI-I)	
	DisplayPort	2	
	Antenna	3 openings reserved for antennas	
Power Supply	DC Input	DC-in 12V pluggable connectors with latch (GND, V-, V+)	
	AC Input	Optional 84W external AC-DC adapter for AC input	
Environment	Operating Temperature	0~45°C (HDD) 0~50°C (SSD or mSATA)	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20°C ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
	Vibration	Operating, 0.25 Grms, 5-300 Hz, 3 aes	
	Shock	Operating, 3 G, half sine 11 ms	
Physical Characteristics	Housing	SGCC, open frame	SGCC, aluminum
	Dimensions	447.2mm x 364mm x 85.6mm	483mm x 399mm x 87.43mm
	Weight	6.7 kg (without bezel)	7.6 Kg (with bezel)
	Mounting	VESA 75/100	
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	
	Safety	TUV, CB	
Software Platform	OS Support	Windows 8, Windows 7	

MSI reserves the right to change the specifications without prior notices.

MS-9A63-D2550

19" Fanless HMI Panel PC with Intel® Mainstream Mobile CPU

Coming Soon

TAIWAN EXCELLENCE 2013

Features

- Intel® mainstream mobile CPU
- 19" TFT LCD with 5-wire resistive touch panel
- Flexible storage interfaces (HDD/SSD/mSATA/SATA DOM)
- Fanless design with excellent ventilation
- Support DC-in 12V
- Open-frame panel PC or with bezel (optional)
- IP65 front panel for water-proof applications

Ordering Information

Part Number	Description
Coming soon	

Packing List

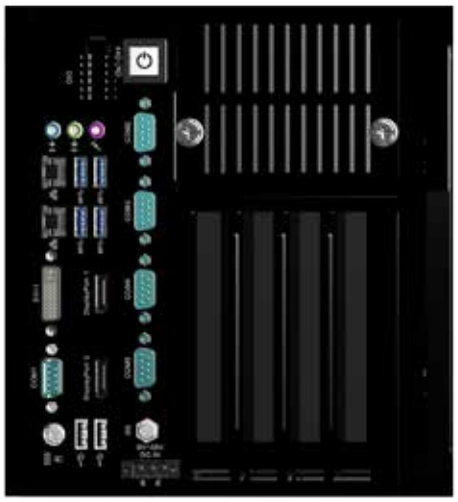
Part Number	Description
Coming soon	

Specifications

		MS-9A63-D2550-FS	MS-9A63-D2550-BS
Display	LCD Size	19"	
	Resolution	1280x1024	
	Brightness (cd/m^2)	350	
	Contrast Ratio	1000:1	
	Support Colors	16.7M	
	Pixel Pitch (H/Vmm)	0.294x0.294	
	Viewing Angle	H: 150~170 degree V: 140~160 degree	
Touch Panel		5-wire resistive touch panel	
System Processor	CPU	Intel® Atom™ Processor D2550, Dual Core	
	Frequency	1.86 GHz	
	L2 Cache	1MB	
	CPU Type	BGA	
	Chipset	Intel® NM10 Express	
	BIOS	AMI	
Memory	Technology	Single-channel DDR3 1066MHz	
	Max. Capacity	Up to 4GB	
	Socket	1 x 204-pin SO-DIMM	
Graphic	Controller	Intel® GMA3650 Graphics	
	Graphic Memory	Shared system memory up to 759 MB SDRAM	
	Multiple Display	2 independent displays	
	Display Interface	HDMI up to 1920 x 1200 VGA up to 1920 x 1200	
Ethernet	Controller	2 x Intel® 82574L GbE LAN	
Audio	Controller	Realtek® ALC887 HD Audio Codec	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	N/A	
Expansion Slot	Mini-PCIe	1 (optional for WiFi module)	
Storage	SATA	320G 2.5" HDD	
	mSATA	1 (shared with Mini-PCIe)	
I/O Interface	RJ-45	2	
	Audio	1 x Line-out, 1 x Line-in, 1 x Mic-in	
	USB	4 x USB 2.0	
	Serial	5 x COM COM1: RS-232/422/485 (0V/5V/12V) COM 2~5: RS-232 (0V/5V/12V)	
	PS/2	2	
	DVI	1 (DVI-D)	
	VGA	1	
	Antenna	3 openings reserved for antennas	
Power Supply	DC Input	DC-in 12V pluggable connectors with latch (GND, V-, V+)	
	AC Input	Optional 84W external AC-DC adapter for AC input	
Environment	Operating Temperature	0~45°C (HDD) 0~50°C (SSD or mSATA)	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20°C ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
	Vibration	Operating, 0.25 Grms, 5-300 Hz, 3 aes	
	Shock	Operating, 3 G, half sine 11 ms	
Physical Characteristics	Housing	SGCC, open frame	SGCC, aluminum
	Dimensions	447.2mm x 364mm x 85.6mm	483mm x 399mm x 87.43mm
	Weight	6.7 kg (without bezel)	7.6 Kg (with bezel)
	Mounting	VESA 75/100	
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	
	Safety	TUV, CB	
Software Platform	OS Support	Windows 7, Windows XP	

MS-9A66

High Performance Fanless Computer with 4th Generation Intel® Processor



Features

- 4th Gen Intel® Core i7/i5/i3, Pentium, and Celeron® processor
- Fanless design to support Intel® 4th Gen CPU (up to 35W)
- 3 independent display supported
- Wide range 9~36V DC power input
- Support AT power mode
- Optional system fan module
- Support 4 expansion slots: 1*PCIe x16; 3*PCI
- GPIO supports 5~24V for automation
- Removable cover for easy maintenance (HDD, memory, CFast, expansion slots)

Ordering Information

Part Number	Description
Coming soon	

Packing List

Part Number	Description
Coming soon	

Coming Soon

Specifications

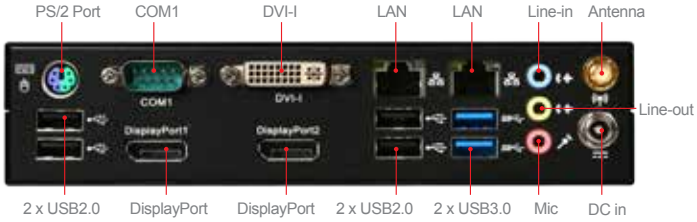
System Processor	CPU	4th Gen Intel® Core™ i5 4570TE, Dual Core	4th Gen Intel® Core™ Celeron G1820TE, Dual Core
	Frequency	2.7GHz	2.2GHz
	L2 Cache	4MB	2MB
	CPU Type	Socket (LGA1150)	
	Chipset	Intel® Q87 Express	
	BIOS	AMI	
Memory	Technology	Dual-channel DDR3 1600/1333MHz	
	Max. Capacity	Up to 16GB	
	Socket	2 x 204-pin SO-DIMMs	
Graphic	Controller	Intel® HD Graphics 4600	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	
	Multiple Display	3 Independent Displays	
	Display Interface	DP up to 3840 x 2160 DVI-I up to 1920 x 1200	
Ethernet	Controller	1 x Intell® I217GbE-PHY LAN 1 x Intell® I210-AT	
Audio	Controller	Realtek® ALC887 HD Audio Codec	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	N/A	
TPM	Controller	Infineon SLB9635TT1.2	
Expansion Slot	PCIe x16	1	
	PCI	3	
	Mini-PCIe	N/A	
Storage	SATA	1 x 2.5" HDD	
	CFast	1	
I/O Interface	RJ-45	2	
	Audio	1 x Mic-in 1 x Line-out 1 x Line-in	
	USB	4 x USB 3.0 2 x USB 2.0	
	Serial	5 x COM ports COM1: RS232/422/485, 0V/5V/12V COM2: RS232/422/485, 0V COM3~5: RS-232, 0V	
	Parallel	1	
	PS/2	1	
	DVI	1 (DVI-I)	
	DisplayPort	2	
Power Supply	DC Input	DC-In 9-36V Wide-Range pluggable connectors with latch (GND, V-, V+)	
	AC Input	N/A	
Environment	Operating Temperature	-10 ~ 50°C	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20 ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
	Vibration	Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)	
	Shock	Operating, 3 G, half sine 11 ms duration (w/ HDD)	
Physical haracteristics	Dimensions	172mm x 225mm x 213mm	
	Weight	4.86 kg	
	Mounting	Wall mount	
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	
	Safety	TUV	
Software Platform	OS Support	Windows 8 (32-bit), Windows 7 (32/64-bit), Windows XP (32/64-bit)	

MSI reserves the right to change the specifications without prior notices.

MS-9A68

Intel® QM77 Platform Supports IVB Processor

NEW



Features

- Support Intel® Ivy Bridge mobile series CPU
- Great 3D graphic performance with high definition up to 1080P
- Support standard and low-voltage DDR3 SO-DIMM up to 16GB
- 3 independent displays: DP+DP+DVI-I
- Support DirectX11 Shader Model 4.0
- Support 2 x Intel® GbE LAN (one with iAMT 8.0) and 2 x USB 3.0
- Support SATA 3.0 and mSATA storage (optional)
- 4 powered COM ports

Ordering Information

Part Number	Description
939-9A68-003	QM77, 19V 90W ADAPTER, USA POWER CORD
939-9A68-004	HM76, 19V 90W ADAPTER, EU POWER CORD
939-9A68-005	HM76, 19V 90W ADAPTER, USA POWER CORD
939-9A68-006	QM77, 19V 90W ADAPTER, EU POWER CORD

Packing List

Part Number	Description
S93-0406260-S14	ADAPTOR
E43-1064014-P65	HDD Screw
E31-0804100-AM1	HEATSINK
K33-3001020-I45	POWER CORD,USA
S79-0000360-V03	ANTENNA
E25-9A58020-K23	HDD RUBBER
E22-9A68050-LA2	VESA mounting bracket
G71-SEDC093-J24	Driver CD

Specifications

System Processor	CPU	3rd Gen Intel® Core™ Mobile Processor (optional)
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket G2 (rPGA 989)
	Chipset	Intel® QM77/HM76 Express
	BIOS	AMI
Memory	Technology	Dual-channel DDR3 1600/1333MHz
	Max. Capacity	Up to 16GB
	Socket	2 x 204-pin SO-DIMMs
Graphic	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	Multiple Display	2 independent displays (SNB CPU only) 3 independent displays (IVB CPU only)
	Display Interface	DP up to 2560 x 1600 DVI-I up to 1920 x 1200
Ethernet	Controller	1 x Intel® 82579 PHY LAN 1 x Intel® I210-AT PCIe LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
Expansion Slot	Mini-PCIe	2 x Full-size (1 w/ SIM Holder)
Storage	SATA	1 x 2.5" HDD/SSD
	mSATA	2 (shared with Mini-PCIe slots)
I/O Interface	RJ-45	2
	Audio	1 x Mic-in 1 x Line-out 1 x Line-in
	USB	2 x USB 3.0 6 x USB 2.0
	Serial	4 x COM ports COM1~4: RS-232, 0V/5V/12V
	PS/2	1
	DVI	1 (DVI-I)
	DisplayPort	2
	Antenna	1
Power Supply	DC Input	DC-in 19V
	AC Input	N/A
Environment	Operating Temperature	0 ~ 50°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
	Vibration	Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)
	Shock	Operating, 3 G, half sine 11 ms duration (w/ HDD)
Physical haracteristics	Dimensions	180mm x 182mm x 42mm
	Weight	1.80 kg
	Mounting	VESA mount
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI
	Safety	CB, UL
Software Platform	OS Support	Windows 8 (32-bit), Windows 7 (32/64-bit), Windows XP (32/64-bit)

MS-9A29

Mini-size Ultra Low-power System with Intel® Atom™ Solution

Features

- Ultra low power with fanless design
- Support dual independent displays with VGA and HDMI
- Support DDR3 SO-DIMM up to 4GB
- Support dual Intel® GbE LAN
- Support dual Mini-PCIe for expansion

Ordering Information

Part Number	Description
939-9A29-001	MS-9A29 VER 10 Intel ATOM D2550 FANLESS BAREBONE, 12V DC IN US POWER CORD.
939-9A29-002	MS-9A29 VER 10 Intel ATOM D2550 FANLESS BAREBONE, 12V DC IN EU POWER CORD.

Packing List

Part Number	Description
G71-SEDC091-J24	Driver DVD
K1D-1010016-V03	SATA Cable with Power
K33-3001020-I45	Power Cord USA.
K33-3001021-I45	Power Cord EUROPE.
S93-0408340-S14	Adapter

NEW

Specifications

System Processor	CPU	Intel® Atom™ Processor D2550, Dual Core
	Frequency	1.86GHz (Dual Core)
	L2 Cache	1MB
	CPU Type	BGA
	Chipset	Intel® NM10 Express
	BIOS	AMI
Memory	Technology	Single-channel DDR3 1066MHz
	Max. Capacity	Up to 4GB
	Socket	1 x 204-pin SO-DIMM
Graphic	Controller	Intel® GMA3650 Graphics
	Graphic Memory	Shared system memory up to 759 MB SDRAM
	Multiple Display	2 independent displays
	Display Interface	VGA up to 1920 x 1200 HDMI up to 1920 x 1200
Ethernet	Controller	2 x Intel® 82583V GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
Expansion Slot	Mini-PCIe	2 x Full-size (one with SIM holder)
Storage	SATA	1 x 2.5" HDD/SSD
	mSATA	1
I/O Interface	RJ-45	2
	Audio	1 x Line-out
	USB	6 x USB 2.0
	Serial	4 x COM ports COM1: RS-232/422/485 COM2~4: RS-232
	HDMI	1
	VGA	1
	Antenna	2 openings reserved for antennas
Power Supply	DC Input	DC-in 12V
	AC Input	N/A
Environment	Operating Temperature	0 ~ 45°C (HDD) 0 ~ 50°C (SSD or mSATA)
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
	Vibration	Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)
	Shock	Operating, 3 G, half sine 11 ms duration (w/ HDD)
Physical haracteristics	Dimensions	196mm x 136mm x 43mm
	Weight	1.20 kg
	Mounting	Wall mount
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI
	Safety	BSMI
Software Platform	OS Support	Windows 7 (32-bit), Windows XP (32-bit)

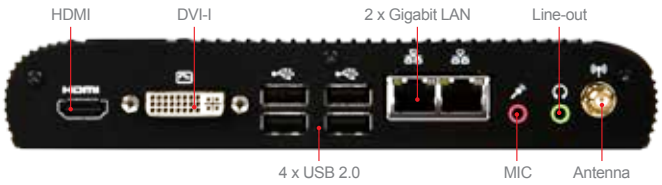
MSI reserves the right to change the specifications without prior notices.

MS-9A55

Slim, Fanless System with Intel® Ivy/Sandy Bridge Processor

WindBOX III Plus

TAIWAN EXCELLENCE 2013



Features

- Slim and fanless system design with Mini-ITX board
- Great 3D graphic performance with high definition up to 1080p
- Dual independent displays with multiple video outputs (HDMI, DVI-I)
- Support DirectX10, Shader Model 4.0, and Intel® Clear Video Technology
- Mini-PCIe slots for WiFi, 3G, or mSATA cards
- Tool-free mounting design for easy installation
- Removable bottom cover for easy mini-PCIe access (memory, HDD, or WiFi/3G installation)
- Support iAMT function

Ordering Information

Part Number	Description
9S9-9A55-001	827E,320GB HDD, 2G memory, WiFi+BT AW-NB114 module, USA power cord
9S9-9A55-002	827E, 320GB HDD, 2G memory, WiFi+BT AW-NB114 module, EU power cord
9S9-9A55-003	i5 2467M, 320GB HDD, 2G memory, WiFi+BT AW-NB114 module, USA power cord
9S9-9A55-004	i5 2467M, 320GB HDD, 2G memory, WiFi+BT AW-NB114 module, EU power cord

Packing List

Part Number	Description
E22-9A25031-C22	VESA Mounting Bracket
K33-3001021-I45	Power Cord, EUROPE
K33-3001021-I45	Power Cord, USA
S79-0000360-V03	RF Antenna
S93-0401330-S14	Adaptor
G71-SEDC076-J24	Driver CD

Specifications

System Processor	CPU	Intel® Core™ i5-3337U, Dual Core	Intel® Celeron® Processor 827E, Single Core
	Frequency	1.8GHz	1.4GHz
	L2 Cache	3MB	1.5MB
	CPU Type	BGA	
	Chipset	Intel® HM76 Express	Intel® HM65 Express
	BIOS	AMI	
Memory	Technology	Dual-channel DDR3 1600/1333/1066 MHz	
	Max. Capacity	Up to 16GB	
	Socket	2 x 204-pin SO-DIMMs	
Graphic	Controller	Intel® HD Graphics	
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	
	Multiple Display	2 independent displays	
	Display Interface	HDMI up to 1920 x 1200 DVI-I up to 1920 x 1200	
Ethernet	Controller	1 x Intel® 82579 PHY LAN 1 x Intel® I210-AT PCIe LAN	
Audio	Controller	Realtek® ALC886/888S HD Audio Codec	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
TPM	Controller	Infineon SLB9635TT1.2	
Expansion Slot	Mini-PCIe	1 x Full-size 1 x Half-size, mSATA	
Storage	SATA	1 x 2.5" HDD/SSD	
	mSATA	1	
I/O Interface	RJ-45	2	
	Audio	1 x Mic-in 1 x Line-out	
	USB	2 x USB 3.0 4 x USB 2.0	
	Serial	2 x COM portss COM1: RS-232/422/485, 0V/5V/12V COM2: RS-232, 0V/5V/12V	
	HDMI	1	
	DVI	1 (DVI-I)	
	Antenna	2	
Power Supply	DC Input	DC-in 19V	
	AC Input	N/A	
Environment	Operating Temperature	0 ~ 40°C	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20 ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
	Vibration	Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)	
	Shock	Operating, 3 G, half sine 11 ms duration (w/ HDD)	
Physical haracteristics	Dimensions	196mm x 285mm x 33mm	
	Weight	2.60 kg	
	Mounting	VESA mount	
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	
	Safety	TUV, CB, UL	
Software Platform	OS Support	Windows 8 (32-bit), Windows 7 (32/64-bit), Windows XP (32/64-bit)	

MS-9A45

Slim and Fanless System with Intel® Atom™ D2550 Processor, GbE LAN, and WLAN for High Performance

WindBOX II Plus

Features

- Low power solution with fanless design
- Support high resolution at 1920 x 1080
- Ultra-mini size: 255 x 180 x 19 (mm; W x D x H)
- Support 2 x Intel® GbE LAN
- Support different voltage inputs for DC SKU (12/19V)
- Support Intel® D2000 series processor
- Mini-PCIe slots for WiFi, 3G, or mSATA cards
- Tool-free mounting design for easy installation
- Removable bottom cover for easy Mini-PCIe access

Ordering Information

Part Number	Description
9S9-9A45-001	320GB HDD, USA
9S9-9A45-002	320GB HDD, EU
9S9-9A45-003	32GB SSD, USA
9S9-9A45-004	32GB SSD, EU
9S9-9A45-005	D2550 B3 2 LAN, 1 Antenna, 2GB Memory, 320GB HDD, EU,(AW-NB114)
9S9-9A45-006	D2550 B3 2 LAN, 1 Antenna, 2GB Memory, 320GB HDD,USA,(AW-NB114)
9S9-9A45-007	D2550 B3 2 LAN, 1 Antenna, 2GB Memory, 32GB SSD, EU, (AW-NB114)
9S9-9A45-008	D2550 B3 2 LAN, 1 Antenna, 2GB Memory, 32GB SSD, USA, (AW-NB114)

Specifications

System Processor	CPU	Intel® Atom™ Processor D2550, Dual Core
	Frequency	1.86GHz
	L2 Cache	1MB
	CPU Type	BGA
	Chipset	Intel® NM10 Express
	BIOS	AMI
Memory	Technology	Singal-channel DDR3 1066MHz
	Max. Capacity	Up to 4GB
	Socket	2 x 204-pin SO-DIMMs
Graphic	Controller	Intel® GMA3600 Graphics
	Graphic Memory	Shared system memory up to 759 MB SDRAM
	Multiple Display	2 independent displays
	Display Interface	HDMI up to 1920 x 1200 DVI-I up to 1920 x 1200
Ethernet	Controller	2 x Intel® 82574L PCIe LAN
Audio	Controller	Realtek® ALC886 HD Audio Codec
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
Expansion Slot	Mini-PCIe	1 x Full-size 1 x Half-size
Storage	SATA	1 x 2.5" HDD
	mSATA	1
I/O Interface	RJ-45	2
	Audio	1 x Mic-in 1 x Line-out
	USB	3 x USB 2.0
	Serial	1 x COM port COM1: RS-232/422/485, 0V/5V/12V
	HDMI	1
	DVI	1 (DVI-I)
	Antenna	2
Power Supply	DC Input	DC-in 19V
	AC Input	N/A
Environment	Operating Temperature	0 ~ 40°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
	Vibration	Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)
	Shock	Operating, 3 G, half sine 11 ms duration (w/ HDD)
Physical haracteristics	Dimensions	180mm x 255mm x 19mm
	Weight	1.08 kg
	Mounting	VESA mount
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI
	Safety	TUV, CB, UL
Software Platform	OS Support	Windows 7 (32-bit), Windows XP

Packing List

Part Number	Description
E22-9A25031-C22	VESA Mounting Bracket
K33-3001021-I45	Power Cord, EUROPE
K33-3001021-I45	Power Cord, USA
S79-0000360-V03	Antenna
S93-0401330-S14	Adaptor
G71-SEDC080-J24	Driver CD

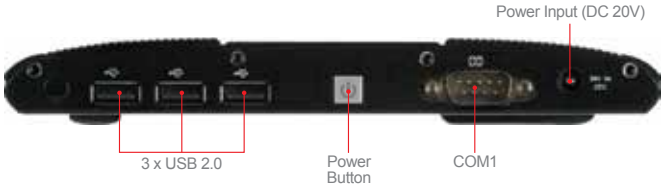
MSI reserves the right to change the specifications without prior notices.

MS-9A25

Intel® Atom™ N270 Fanless Solution for High Performance with GbE LAN and WLAN

WindBOX II

TAIWAN EXCELLENCE 2011



Features

- Low power solution with fanless design
- Optional hardware decoder for 1080p MPEG-2, H.264, and VC-1 playback
- Tool-free mounting design for easy installation
- Ultra-mini size: 255 x 180 x 19 (mm; W x D x H)
- Support Intel® Atom™ N270 processor
- Mini-PCIe slots for WiFi, 3G, TV tuner card, or H.264

Ordering Information

Part Number	Description
9S9-9A25-027	WindBOXII,VER 1.0, 2 WLAN, 2 (3G) ANTENNA, EU POWER CORD (NON-OS)
9S9-9A25-029	WindBOXII, VER 1.0, 2 WLAN, 2 (3G) ANTENNA, US POWER CORD (NON-OS)
TBD coming soon	MS-9A25 with XPE

Packing List

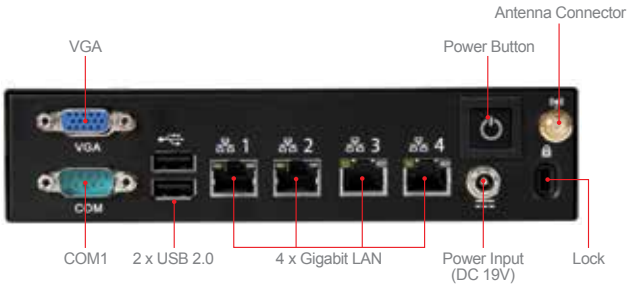
Part Number	Description	Quantity
S93-0408120-D04	ADAPTOR	1
K33-3001020-I45	POWER CODE, USA	1
K33-3001021-I45	POWER CODE, EUROPE	1
S79-0000360-V03	RF ANTENNA	1
S79-0000370-V03	3.5G/RF ANTENNA	1
G71-SEDC040-J24	Driver CD	1
E22-9A25031-C22	VESA 75/100 MOUNTING BRACKET	1

Specifications

System Processor	CPU	Intel® Atom™ Processor N270
	Frequency	1.86GHz
	L2 Cache	512KB
	CPU Type	BGA
	Chipset	Intel® 945GSE + ICH7M
	BIOS	AMI
Memory	Technology	Dual-channel DDR2 400/533MHz
	Max. Capacity	Up to 2GB
	Socket	1 x 200-pin SO-DIMM
Graphic	Controller	Intel® GMA950 Graphics
	Graphic Memory	Shared system memory up to 759 MB SDRAM
	Multiple Display	Single display
	Display Interface	HDMI up to 1920 x 1200 DVI-I up to 1920 x 1200
Ethernet	Controller	2 x Intel® 82574L PCIe LAN
Audio	Controller	Realtek® ALC888 HD Audio Codec
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
Expansion Slot	Mini-PCIe	2 x Full-size (1 w/ SIM Holder)
Storage	SATA	1 x 2.5" HDD
I/O Interface	RJ-45	2
	Audio	1 x Mic-in 1 x Line-out
	USB	3 x USB 2.0
	Serial	1 x COM port COM1: RS-232/422/485, 0V/5V/12V
	HDMI	1
	DVI	1 (DVI-I)
	Antenna	2
Power Supply	DC Input	DC-in 20V
	AC Input	N/A
Environment	Operating Temperature	0 ~ 40°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
	Vibration	Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)
	Shock	Operating, 3 G, half sine 11 ms duration (w/ HDD)
Physical haracteristics	Dimensions	180mm x 255mm x 19mm
	Weight	1.08 kg
	Mounting	VESA mount
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI
	Safety	TUV, CB, UL
Software Platform	OS Support	Windows XP, Linux Suse

MS-9A58

Intel® Atom™ D525 Processor for Networking Applications



Specifications

System Processor	CPU	Intel® Atom™ Processor D525, Dual Core
	Frequency	1.8GHz
	L2 Cache	1MB
	CPU Type	BGA
	Chipset	Intel® ICH9R
	BIOS	AMI
Memory	Technology	Dual-channel DDR3 800MHz
	Max. Capacity	Up to 4GB
	Socket	2 x 204-pin SO-DIMMs
Graphic	Controller	Intel® GMA3150 Graphics
	Graphic Memory	Shared system memory up to 384 MB SDRAM
	Multiple Display	Single display
	Display Interface	VGA up to 1920 x 1200
Ethernet	Controller	4 x Intel® 82574L PCIe LAN (optional by-pass function for 2 LAN)
Audio	Controller	N/A
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
Expansion Slot	Mini-PCIe	1
Storage	SATA	1 x 2.5" HDD
I/O Interface	RJ-45	4
	USB	2 x USB 2.0
	Serial	1 x COM port COM1: RS-232/422/485, 0V/5V/12V
	VGA	1
	Antenna	1
Power Supply	DC Input	DC-in 19V
	AC Input	N/A
Environment	Operating Temperature	0 ~ 40°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
	Vibration	Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)
	Shock	Operating, 3 G, half sine 11 ms duration (w/ HDD)
Physical haracteristics	Dimensions	180mm x 180mm x 44mm
	Weight	1.20 kg
	Mounting	VESA mount
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI
	Safety	N/A
Software Platform	OS Support	Windows 7 (32-bit), Windows XP, Linux SLED 11

Features

- Support Intel® Atom™ D525 dual-core CPU to maximize performance
- DDR3 SO-DIMMs for better memory capability
- SATA port for storage applications
- Support 4 x Intel® GbE LAN (optional by-pass function for 2 LAN)
- Fanless design

Ordering Information

Part Number	Description
9S9-9A58-001	MS-9A58 VER 1.0 GM45+ICH9M, 19V DC ADAPTER, DRIVER CD, USA POWER CORD SINGLE
9S9-9A58-002	MS-9A58 VER 1.0 GM45+ICH9M, 19V DC ADAPTER, DRIVER CD, EU POWER CORD SINGLE

Packing List

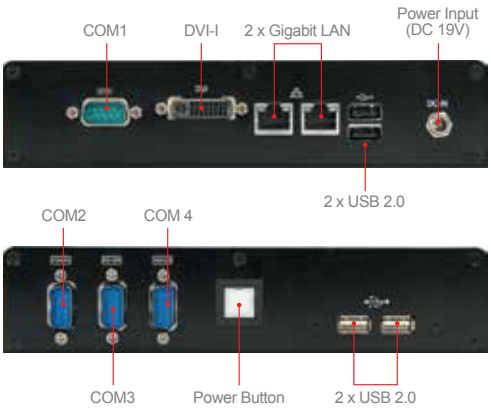
Part Number	Description
G71-SEDC086-J24	Driver CD
K33-3001020-I45	POWER CORD,USA
K33-3001021-I45	POWER CORD,EU
S79-0000360-V03	ANTENNA
S93-0401330-S14	ADAPTOR
E25-9A58020-K23	RUBBER
E43-1064008-P65	SCREW
E43-140A006-P65	SCREW
E22-9A58040-LA2	BRACKET

MSI reserves the right to change the specifications without prior notices.

MS-9A19

Ultra-mini Low Power System with Intel® Atom™ Solution

TAIWAN EXCELLENCE 2011



Specifications

System Processor	CPU	Intel® Atom™ Processor N270
	Frequency	1.6GHz
	L2 Cache	512KB
	CPU Type	BGA
	Chipset	Intel® 945GSE + ICH7M
	BIOS	AMI
Memory	Technology	Dual-channel DDR2 400/533MHz
	Max. Capacity	Up to 2GB
	Socket	1 x 200-pin SO-DIMM
Graphic	Controller	Intel® GMA950 Graphics
	Graphic Memory	Shared system memory up to 256 MB SDRAM
	Multiple Display	Single display
	Display Interface	DVI-I up to 1920 x 1080
Ethernet	Controller	2 x Intel® 82574L GbE LAN
Audio	Controller	Realtek® ALC888 HD Audio Codec
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
Expansion Slot	Mini-PCIe	1 x Full-size
Storage	SATA	1 x 2.5" HDD/SSD
I/O Interface	RJ-45	2
	USB	4 x USB 2.0
	Serial	1 x COM port COM1: RS-232/422/485, 0V/5V/12V
	DVI	1 (DVI-I)
Power Supply	DC Input	DC-in 12V
	AC Input	N/A
Environment	Operating Temperature	0 ~ 40°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
	Vibration	Operating, 0.25 Grms, 5-300Hz, 3axes (w/ HDD)
	Shock	Operating, 3 G, half sine 11 ms duration (w/ HDD)
Physical haracteristics	Dimensions	195mm x 145mm x 43mm
	Weight	1.17 kg
	Mounting	Wall mount
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI
	Safety	BSMI
Software Platform	OS Support	Windows XP

Features

- Fanless design in ultra mini Size
- DVI-I and dual Gigabit LAN
- Increased energy efficiency

Ordering Information

Part Number	Description
939-9A19-001	MS-9A19 VER INTEL ATOM N270 FANLESS BARE-BONE, 12V DC IN US POWER
939-9A19-002	MS-9A19 VER INTEL ATOM N270 FANLESS BARE-BONE, 12V DC IN EU POWER

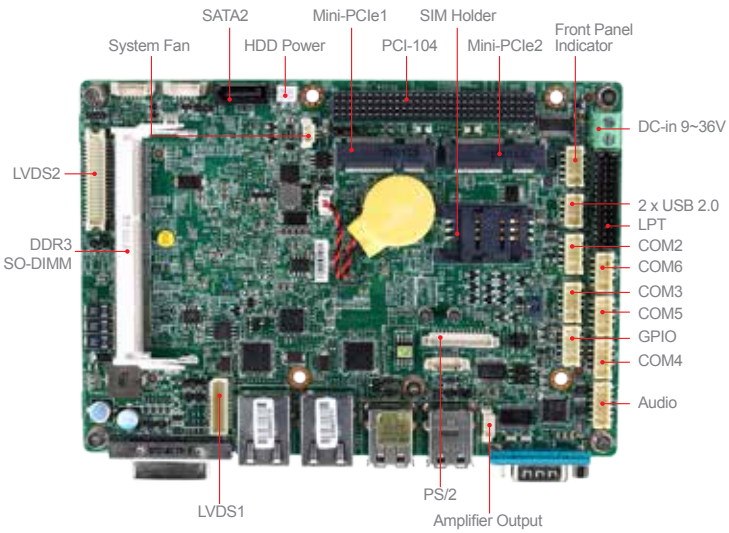
Packing List

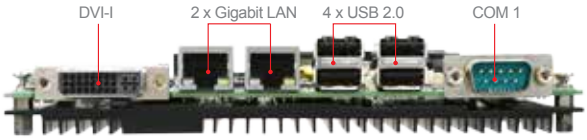
Part Number	Description	Quantity
G71-SEDC034-J24	DRIVER CD	1
K33-3001020-I45	POWER CORD,USA	1
K33-3001021-I45	POWER CORD,EUROPE	1
S93-0408340-S14	ADAPTOR	1
E22-9A19020-C22	MOUNTING BRACKET	2

MS-98D1

Intel® Embedded Atom™ Cedar Trail Platform in EPIC Size for Low Power Fanless Solution

NEW





Specifications

Processor	CPU	Intel® Atom™ Processor D2550/N2800/ N2600, Dual Core
	Frequency	1.86GHz (Dual Core, for D2550/N2800) 1.6GHz (Dual Core, for N2600)
	L2 Cache	1MB
	CPU Type	BGA
	Chipset	Intel® NM10 Express
	BIOS	AMI
Memory	Technology	Single-channel DDR3 1066MHz (DDR3 800MHz for N2600)
	Max. Capacity	Up to 4GB (for D2550/N2800) Up to 2GB (for N2600)
	Socket	1 x 204-pin SO-DIMM
Display	Controller	Intel® GMA3650 Graphics
	Graphic Memory	Shared system memory up to 759 MB SDRAM
	LVDS	2 x LVDS (LVDS1/LVDS2) LVDS1: single-channel 24-bit (for D2550); single-channel 18-bit (for N2800/ N2600) LVDS2: dual-channel 24-bit (add chrontel 7511B chipset)
	DVI	Yes (DVI-I)
	Multiple Display	2 independent displays
	Display Mode	LVDS1 up to 1440 x 900 (for D2550); up to 1366 x 768 (for N2800/N2600) LVDS2 up to 1920 x 1200 DVI-I up to 1920 x 1200
Ethernet	Controller	2 x Intel® I210-AT GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
I/O Interface	USB	6 x USB 2.0 (4 x rear; 2 x internal)
	Serial	6 x COM (COM1: rear; COM2~6: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~6: RS-232, 0V/5V/12V
	Parallel	1
	PS/2	1 (pin header)
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCI	*
	Mini-PCIe	2 x Full-size (one w/ SIM holder; one w/ mSATA)
Storage	SATA	1 x SATA 2.0
	mSATA	1
Power Supply	DC	DC-in 9-36V Wide-Range
	ATX	N/A
Environment	Operating Temperature	-10 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	165mm x 115mm (EPIC)
	Weight	0.37 kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

* 1 x PCI-104

Features

- Intel® D2550/N2800/N2600 Dual Core processor
- Support DDR3 1066MHz SO-DIMM memory up to 4GB
- 2 independent displays with VGA, DVI, and dual LVDS outputs
- Support dual Intel® GbE LAN and dual Mini-PCIe
- Support SATA 2.0, mSATA, 6 COM, 6 USB 2.0
- Wide input voltage: 9~36 VDC

Ordering Information

Part Number	Description
919-98D1-001	Cedarview D2550 1.86G CPU + NM10, 1*PCI-104, 2*LVDS, 1*VGA, 1*SATA, 1*MSATA, 2*MINI-PCI
919-98D1-002	Cedarview N2800 1.86G CPU + NM10, 1*PCI-104, 2*LVDS, 1*VGA, 1*SATA, 1*MSATA, 2*MINI-PCI
919-98D1-003	Cedarview N2600 1.60G CPU + NM10, 1*PCI-104, 2*LVDS, 1*VGA, 1*SATA, 1*MSATA, 2*MINI-PCI

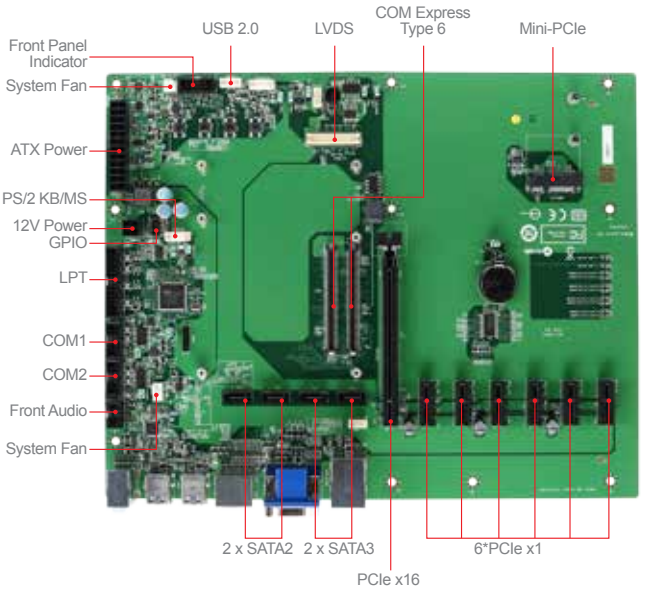
Packing List

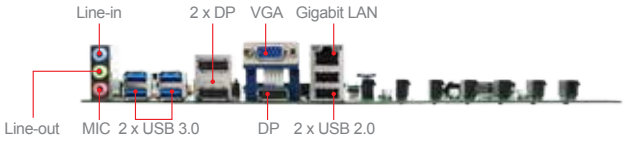
Part Number	Description
K1D-3010001-V03	SATA Cable with Power
K14-1009062-V03	COM Port Cable
K1G-3002013-V03	DC JACK Power Cable

MSI reserves the right to change the specifications without prior notices.

MS-9988

COM Express Type 6 Carrier Board





Coming Soon

Specifications

Processor	CPU	N/A
	BIOS	AMI
Display	Controller	N/A
	LVDS	Dual channel 24-bit (depends on module board)
	VGA	1
	DisplayPort	3
	Multiple Display	2 independent displays 3 independent displays
	Display Mode	Depends on module board
Ethernet	Controller	1 x RJ45 for COM Express module board
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
I/O Interface	USB	4 x USB 3.0 (4 x rear) 4 x USB 2.0 (2 x rear; 2 x internal)
	Serial	2 x COM (internal) COM1 RS-232/422/485, 0V/5V/12V COM2 RS-232, 0V/5V/12V
	Parallel	1
	PS/2	1 (wafer connector)
	GPIO	8-bits (4 x GPI; 4 x GPO)
Expansion Slot	PCIe x16	1
	PCIe x1	6
	Mini-PCIe	1 x Full-size
Storage	SATA	2 x SATA 3.0; 2 x SATA 2.0
Power Supply	DC	N/A
	ATX	ATX-24P, 12V-4P
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	305mm x 244mm (ATX)
	Weight	0.6 Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Support VGA, LVDS, and 3 DP ports
- 1 x RJ45 for COM Express module board
- 4 x USB 3.0, 4 x USB 2.0, and 2 COM ports
- Support 2 SATA 3.0 and 2 SATA 2.0

Ordering Information

Part Number	Description
Coming soon	

Packing List

Part Number	Description
Coming soon	

MS-98D7

Intel® i7/i5/i3/Celeron Embedded Mobile Processor in COM Express Compact Solution

Coming Soon

Specifications

Processor	CPU	3rd Gen Intel® Mobile Core™ i7-3517UE/i3-3217UE/1020E Celeron Processor
	Frequency	2.8GHz/1.6GHz/2.2GHz
	L2 Cache	4MB/3MB/2MB
	CPU Type	BGA
	Chipset	Intel® QM77 Express
	BIOS	AMI
Memory	Technology	Single-channel DDR3 1600MHz
	Max. Capacity	Up to 8GB
	Socket	1 x 204-pin SO-DIMM
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	LVDS	Dual channel 24-bit
	VGA	1
	DVI	3 DDI ports support DVI/HDMI/DP (DDI1 supports Video out also)
	HDMI	
	DisplayPort	
	Multiple Display	2 independent displays 3 independent displays
	Display Mode	VGA up to 2048 x 1536 LVDS up to 1920 x 1200 @60 Hz 3 x DDI: HDMI/DVI up to 1920 x 1200 @60 Hz; DP up to 2560 x 1600 @60 Hz
Ethernet	Controller	1 x Intel® 82579LM GbE-PHY LAN (AMT 8.0 supported)
Audio	Controller	Support HD audio interface to carrier board
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Pin header
I/O Interface	USB	8 x USB 2.0 (to carrier board) 4 x USB 3.0 (to carrier board)
	Serial	2 x COM (to carrier board)
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCIe x16	1
	PCIe x1	7
Storage	SATA	2 x SATA 3.0; 2 x SATA 2.0
Power Supply	DC	N/A
	ATX	ATX +12 V and +5 VSB (standby power) AT: +12 V
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	95mm x 95mm (COM Express compact module)
	Weight	95 g
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Intel® Embedded Mobile i7/i5/i3/Celeron® processor
- Support DDR3 1600 SO-DIMM up to 8GB
- Support VGA, LVDS, and 3 DDI ports
- One Intel® GbE LAN w/ iAMT 8.0 supported
- Support 2 SATA 3.0, 2 SATA 2.0, 2 COM, 4 USB 3.0, and 8 USB 2.0 ports

Ordering Information

Part Number	Description
Coming soon	

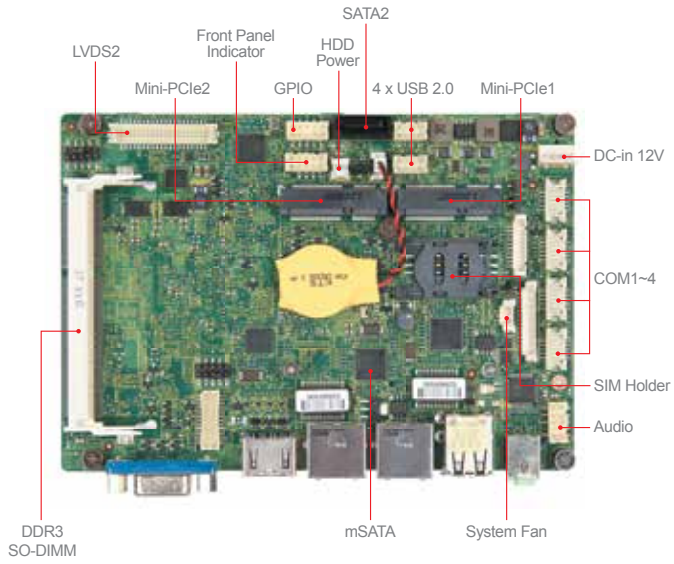
Packing List

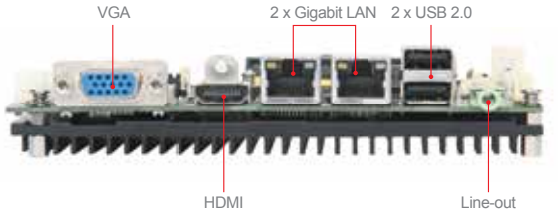
Part Number	Description
Coming soon	

MSI reserves the right to change the specifications without prior notices.

MS-9896 V1.0

Intel® Embedded Atom™ Cedar Trail 3.5" Fanless Solution for Low Power and High Performance





Features

- Support Intel® D2550/N2800/N2600 Dual Core CPU to maximize performance
- Support DDR3 1066MHz SO-DIMM memory up to 4GB
- Support HDMI, VGA, dual LVDS, and dual Intel® GbE LAN
- Dual Mini-PCIe, SATA 2.0, mSATA, 4 COM, and 6 USB 2.0
- Support DC-in 12V power source

Ordering Information

Part Number	Description
919-9896-001	MS-9896 VER 10 3.5inch M/B ATOM D2550 + NM10, 1*DDR3 SO-DIMM,
	1*VGA, 1*HDMI, 2*LVDS, 1*SATA2, 1*mSATA, 2*MI-NI-PCIE, 2*GbE LAN
919-9896-002	MS-9896 VER 10 OPT A 3.5inch M/B ATOM N2800 + NM10,
	1*DDR3 SO-DIMM, 1*VGA, 1*HDMI, 2*LVDS, 1*SATA2, 1*mSATA,
	2*MINI-PCIE, 2*GbE LAN
919-9896-003	MS-9896 VER 10 OPT B 3.5inch M/B ATOM N2600 + NM10,
	1*DDR3 SO-DIMM, 1*VGA, 1*HDMI, 2*LVDS, 1*SATA2, 1*mSATA,
	2*MINI-PCIE, 2*GbE LAN

Packing List

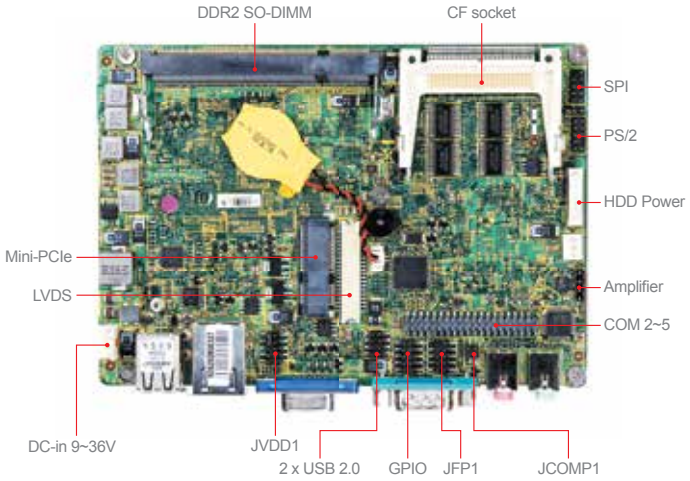
Part Number	Description	Quantity
K10-3002145-V03	DC power Cable	1
K1D-1010013-V03	SATA Cable with Power	1
G71-SEDC074-J24	Driver DVD	1

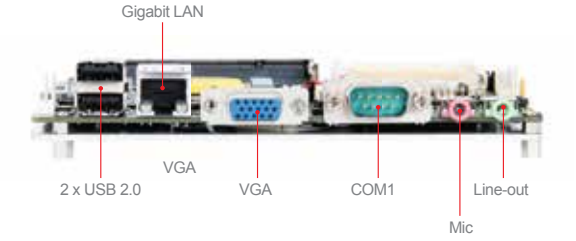
Specifications

Processor	CPU	Intel® Atom™ Processor D2550/N2800/ N2600, Dual Core
	Frequency	1.86GHz (Dual Core; for D2550/N2800) 1.6GHz (Dual Core; for N2600)
	L2 Cache	1MB
	CPU Type	BGA
	Chipset	Intel® NM10 Express
	BIOS	AMI 32Mbit SPI
Memory	Technology	Single-channel DDR3 1066MHz (DDR3 800MHz for N2600)
	Max. Capacity	Up to 4GB
	Socket	1 x 204-pin SO-DIMM
Display	Controller	Intel® GMA3650 Graphics
	Graphic Memory	Shared system memory up to 759 MB SDRAM
	LVDS	2 x LVDS (LVDS1/LVDS2) LVDS1: single-channel 24-bit (for D2550); single-channel 18-bit (for N2800/ N2600) LVDS2: dual-channel 24-bit (add chrontel 7511B chipset)
	VGA	1
	HDMI	1
	Multiple Display	2 independent displays
	Display Mode	LVDS1 up to 1440 x 900 (for D2550); up to 1366 x 768 (for N2800/N2600) LVDS2 up to 1920 x 1200 VGA up to 1920 x 1200 HDMI up to 1920 x 1200
Ethernet	Controller	2 x Intel® 82583V GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
I/O Interface	USB	6 x USB 2.0 (2 x rear; 4 x internal)
	Serial	4 x COM (internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V
	PS/2	N/A
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	Mini-PCIe	2 x Full-size (one with SIM holder)
Storage	SATA	1 x SATA 2.0
	mSATA	1
Power Supply	DC	DC-in 12V
	ATX	N/A
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	146mm x 102mm (3.5")
	Weight	0.28 kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

MS-9886

Low Power and Ultra Mini Size with Intel® Atom™ Solution





Specifications

Processor	CPU	Intel® Atom™ Processor N270
	Frequency	1.6GHz
	L2 Cache	512KB
	CPU Type	BGA
	Chipset	Intel® 945GSE+ ICH7M
	BIOS	AMI
Memory	Technology	Single-channel DDR2 400/533 MHz
	Max. Capacity	Up to 2GB
	Socket	1 x 200-pin SO-DIMM
Display	Controller	Intel® GMA950 Graphics
	Graphic Memory	Shared system memory up to 256 MB SDRAM
	LVDS	Dual channel 24-bit
	VGA	1
	Multiple Display	Dual display
	Display Mode	LVDS up to 1920 x 1080 VGA up to 1920 x 1080
Ethernet	Controller	1 x Intel® 82574L GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81865
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
I/O Interface	USB	4 x USB 2.0 (2 x rear; 2 x interal)
	Serial	5 x COM ports (COM1: rear; COM2~5: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~5: RS-232, 0V/5V/12V
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	Mini-PCIe	1 x Full-size
Storage	SATA	1 x SATA 2.0
	CompactFlash	1
Power Supply	DC	DC-In 9-36V Wide-Range
	ATX	N/A
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	146mm x 102mm (3.5")
	Weight	0.23 kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- 3.5" small form factor with Intel® Atom™ N270 processor
- 5 COM ports (with 4 COM powered)
- Dual display: VGA + Dual-channel 24-bit LVDS
- Intel® Gigabit LAN
- Audio with 2W amplifier
- GPIO, CF socket, Mini-PCIe provided
- Support DDR2 SO-DIMM memory
- Wide input voltage: 9~36 VDC

Ordering Information

Part Number	Description
919-9886-002	MS-9886 VER 0A OPT NA INTEL ATOM N270+945GSE+ICH7M, WITH MSI LOGO LABLE, STANDARD SKU SINGLE
919-9886-003	MS-9886 VER 0A INTEL ATOM N270+945GSE+ICH7M, WITHOUT MSI LOGO LABLE, STANDARD SKU SINGLE

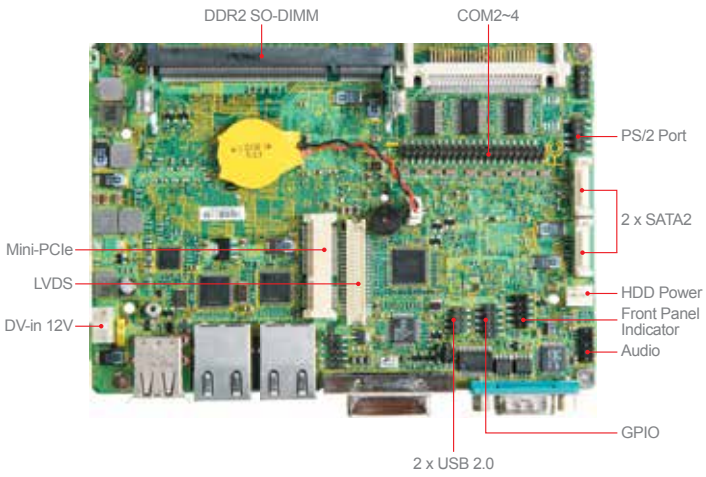
Packing List

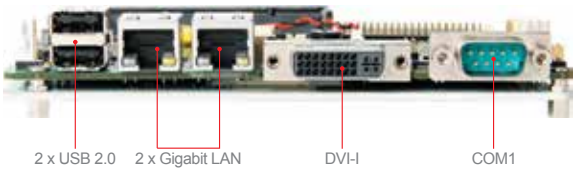
Part Number	Description
K1D-1011001-V03	SATA CABLE
K14-1036004-V03	COM PORT CABLE
N33-1020351-H06	CNT JUMPER
E42-5045001-P65	SCREW
K10-3002180-V03	ROUND CABLE
G71-SEDC055-J24	DRIVER CD

MSI reserves the right to change the specifications without prior notices.

MS-9856

Low Power and Ultra Mini Size with Intel® Atom™ Solution





Specifications

Processor	CPU	Intel® Atom™ Processor N270
	Frequency	1.6GHz
	L2 Cache	512KB
	CPU Type	BGA
	Chipset	Intel® 945GSE + ICH7M
	BIOS	AMI
Memory	Technology	Single-channel DDR2 400/533 MHz
	Max. Capacity	Up to 2 GB
	Socket	1 x 200-pin SO-DIMM
Display	Controller	Intel® GMA950 Graphics
	Graphic Memory	Shared system memory up to 256 MB SDRAM
	LVDS	Dual channel 18-bit
	DVI	1 (DVI-I)
	Multiple Display	Dual display
	Display Mode	LVDS up to 1920 x 1080 VGA up to 1920 x 1080 DVI-D up to 1920 x 1080
Ethernet	Controller	2 x Intel® 82574L GbE LAN
Audio	Controller	Realtek® ALC888 HD HD Audio Codec
Super I/O	Controller	ITE IT8783F
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
I/O Interface	USB	4 x USB 2.0 (2 x rear; 2 x internal)
	Serial	4 x COM ports (COM1: rear; COM2~4: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V
	PS/2	1 (pin header)
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	Mini-PCIe	1 x Full-size
Storage	SATA	2 x SATA 2.0
	CompactFlash	1
Power Supply	DC	DC-in 12V
	ATX	N/A
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	146mm x 102mm (3.5")
	Weight	0.24 kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Fanless design and ultra mini size
- Dual disaply with DVI-I and LVDS
- Increased energy efficiency

Ordering Information

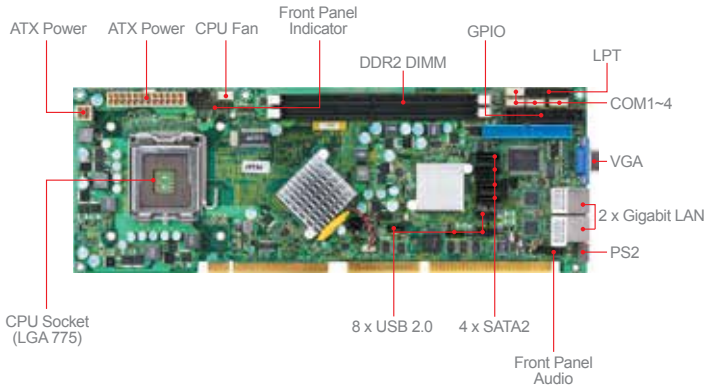
Part Number	Description
919-9856-001	MS-9856 VER 10 INTEL ATOM N270 3.5" SOC, 2*GIGABIT LAN+ 5*COM

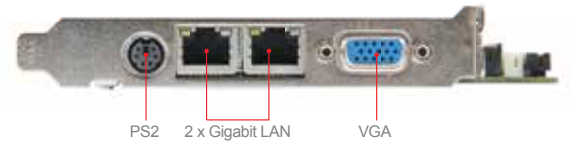
Packing List

Part Number	Description	Quantity
K10-3002126-V03	Internal ROUND CABLE (4pin HSG to DC plug)	1
K14-1009053-V03	Internal COM PORT CABLE	2
K1B-3008021-V03	Internal USB CABLE	1
K1D-1011001-V03	Internal SATA CABLE	1
G52-98562X1-AG4	User MANUAL	1
G71-SEDC032-J24	Driver CD	1

MS-9868

Low Power Solution with Extreme Performance





Specifications

Processor	CPU	Intel® Core™ 2 Duo, Pentium™ 4, Pentium™ D Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket (LGA 775)
	Chipset	Intel® 945GC + ICH7R
	BIOS	AMI
Memory	Technology	Dual-channel DDR2 533/667MHz
	Max. Capacity	Up to 4 GB
	Socket	2 x 240-pin DIMMs
Display	Controller	Intel® GMA950 Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	VGA	1
	Multiple Display	Single display
	Display Mode	LVDS up to 1920 x 1080 VGA up to 1920 x 1080
Ethernet	Controller	2 x Realtek® RTL8111C GbE LAN
Audio	Controller	Realtek® ALC888 HD Audio Codec
Super I/O	Controller	Fintek F81865
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
I/O Interface	USB	8 x USB 2.0 (internal)
	Serial	4 x COM (internal) COM1&2: RS-232/422/485 COM3&4: RS-232
	Parallel	1 (pin header)
	PS/2	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Storage	SATA	4 x SATA 2.0
	IDE	1
Power Supply	DC	N/A
	ATX	ATX/AT-Power 24P, 12V-4P, power from PICMG 1.0 backplane
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	338mm x 122mm (PICMG 1.0)
	Weight	0.40 kg
Certification	EMC	FCC, CE

Features

- Low power solution
- PICMG 1.0 PCI+ISA expansion slot
- Support dual Gigabit LAN
- 2 x RS-232/422/485 as BOM option

Ordering Information

Part Number	Description
919-9868-001	MS-9868 10 LGA775+Intel 945GC+2 x GB LAN 2RS232+2 x RS232/422/485
919-9868-002	MS-9868 10 LGA775+Intel 945GC+1 x GB LAN 2RS232

Packing List

Part Number	Description	Quantity
K12-1080099-E06	ATA CABLE	1
K14-1018003-V03	COM PORT CABLE	1
K1D-3004008-E06	SATA CABLE ,POWER	1
K39-3002004-E06	PS2 Y-CABLE	1
K10-1026001-V03	PRINTER PORT FLY CABLE	1
K10-1013005-V03	FLAT CABLE	1
K1B-3008012-E06	USB CABLE	1
K1D-1008063-V03	SATA CABLE,SIGNAL	1
K13-1034062-E06	FDD CABLE	1
G52-98682X1-Q13	USER MANUAL	1
G71-SEDC044-J24	DRIVER CD	1

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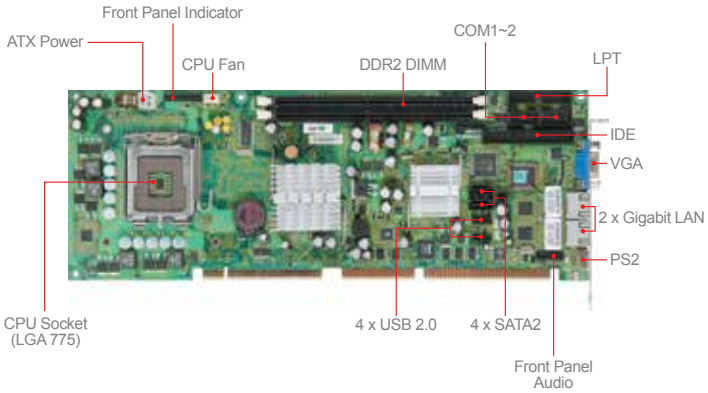
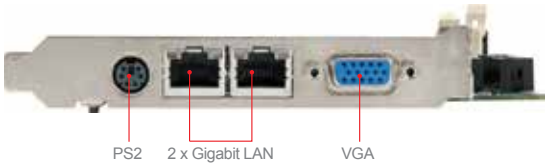
MS-9643

PCIMG 1.0 PCI/ISA SBC Motherboard





Specifications

Processor	CPU	Intel® Pentium™ 4, Pentium™ D, Celeron™ D Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket (LGA 775)
	Chipset	Intel® Q965 + ICH8
	BIOS	Award
Memory	Technology	Dual-channel DDR2 533/667/800MHz
	Max. Capacity	Up to 4 GB
	Socket	2 x 240-pin DIMMs
Display	Controller	Intel® GMA3100 Graphics
	Graphic Memory	Shared system memory up to 256 MB SDRAM
	VGA	1
	Multiple Display	Single display
	Display Mode	LVDS up to 1920 x 1080 VGA up to 1920 x 1080
Ethernet	Controller	2 x Marvell 88E8056A2 GbE LAN
Audio	Controller	Realtek® ALC888 HD Audio Codec
Super I/O	Controller	Winbond W83627EHG
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
I/O Interface	USB	4 x USB 2.0 (internal)
	Serial	2 x COM (internal) COM1&2: RS-232/422/485
	Parallel	1 (pin header)
	PS/2	1
Storage	SATA	2 x SATA 2.0
	IDE	1
Power Supply	DC	N/A
	ATX	ATX/AT-Power 12V-4P, power from PICMG 1.0 backplane
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	338mm x 122mm (PICMG 1.0)
	Weight	0.40 kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Support Intel® Core™ 2 Duo, Core™ Duo, Pentium D desktop processor
- PCIMG 1.0 PCI + ISA expansion slot
- Integrated dual GbE LAN and Audio

Ordering Information

Part Number	Description
919-9643-011	MS-9643 Super Q965+2 Gb LAN+1 IDE port (Single Board Computer)

Packing List

Part Number	Description	Quantity
K1D-3004008-E06	SATA CABLE,POWER	1
G52-96431X5-Q13	USER MANUAL	1
G52-SXXXXX1-Q13	QUICK GUIDE	1
G71-SEDC002-J24	DRIVER CD	1
K12-1080099-E06	IDE ATA66 CABLE	1
K14-1009040-V03	COM PORT CABLE, 2*5pin,KEY10	1
K14-1034001-V03	COM PORT+2*5pin(KEY10)-2*13pin(KEY26)	1
K1B-3008012-E06	USB CABLE	1
K1D-1008063-V03	SATA CABLE,SIGNAL	1
K39-3002004-E06	PS2 Y CABLE	1

MS-98F5

Intel® Bay Trail Solution with Low Power and Low Profile Design

Features

- Support Intel® Quad Core 1.86GHz processor
- Low power and fanless design
- Support 6 COMs and 8 USB 2.0
- Intel® Gen 7 graphics technology

Ordering Information

Part Number	Description
Coming soon	

Packing List

Part Number	Description
Coming soon	

Coming Soon

Specifications

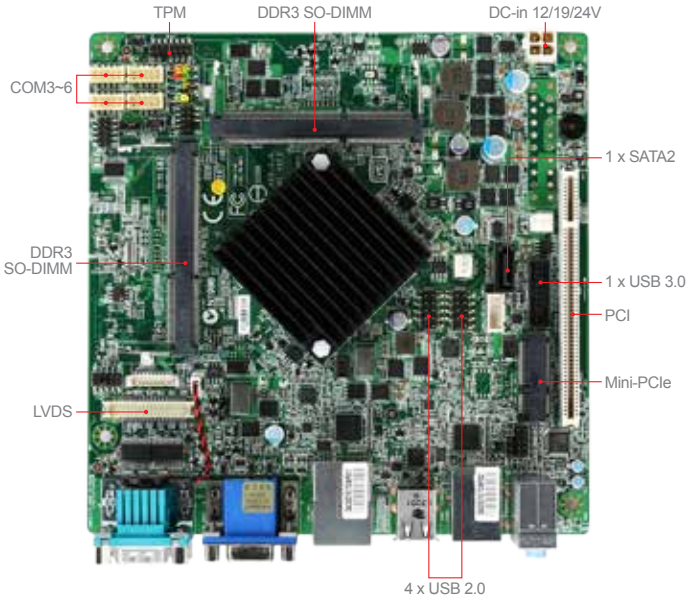
Processor	CPU	Intel® Atom™ Bay Trail J1900, Quad Core	Intel® Atom™ Bay Trail N2920, Quad Core
	Frequency	2.0 GHz	1.86 GHz
	L2 Cache	2 MB	2 MB
	CPU Type	BGA	
	Chipset	Integrated	
	BIOS	AMI	
Memory	Technology	Dual-channel DDR3L 1333 MHz	Dual-channel DDR3L 1066 MHz
	Max. Capacity	Up to 8GB	
	Socket	2 x 204-pin SO-DIMMs	
Display	Controller	Intel® HD Graphics	
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	
	LVDS	Daul Channel 24-bit (add chrontel 7511B chipset)	
	VGA	1	
	Multiple Display	2 independent displays	
	Display Mode	VGA up to 1920 x 1200 LVDS up to 1920 x 1200	
Ethernet	Controller	2 or 1 x Realtek® RTL8111G-CG GbE LAN (depends on SKU)	
Audio	Controller	Realtek® ALC887 HD Audio Codec	
Super I/O	Controller	Fintek F81866	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	Yes	
TPM	Controller	Pin header	
I/O Interface	USB	8 x USB 2.0 (4 x internal; 4 x rear)	
	Serial	6 x COM (5 x internal; 1 x rear) COM1: RS-232, 0V/5V/12V COM 2~6: RS232, w/o power	
	Parallel	1 (Pin header)	
	PS/2	1 (Pin header)	
	GPIO	8-bits (4 x GPI, 4 x GPO), 5V	
Expansion Slot	PCIe x1	1	
	Mini-PCIe	1 x Full-size, mSATA	
Storage	SATA	1 x SATA 2.0	
	mSATA	1	
Power Supply	DC	DC-in 12V	
	ATX	N/A	
Environment	Operating Temperature	0 ~ 60°C	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20 ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)	
	Weight	0.37 Kg	
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	

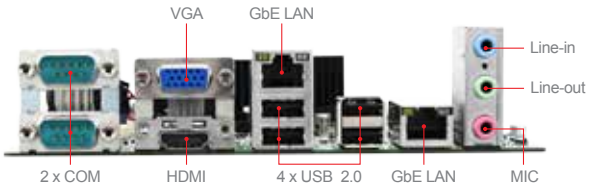
MSI reserves the right to change the specifications without prior notices.

MS-98E3

Intel® Bay Trail D/M SKU Processor Platform

NEW





Specifications

Processor	CPU	Intel® Atom™ Bay Trail J1900, Quad Core	Intel® Atom™ Bay Trail N2920, Quad Core
	Frequency	2.0 GHz	1.86 GHz
	L2 Cache	2 MB	2 MB
	CPU Type	BGA	
	Chipset	Integrated	
	BIOS	AMI	
Memory	Technology	Dual-channel DDR3L 1333 MHz	Dual-channel DDR3L 1066 MHz
	Max. Capacity	Up to 8GB	
	Socket	2 x 204-pin SO-DIMMs	
Display	Controller	Intel® HD Graphics	
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	
	LVDS	Daul Channel 24-bit (add chrontel 7511B chipset)	
	VGA	1	
	HDMI	1	
	Multiple Display	2 independent displays	
	Display Mode	VGA up to 1920 x 1200 HDMI up to 1920 x 1200 LVDS up to 1920 x 1200	
Ethernet	Controller	2 x Intel® i210-AT GbE LAN	
Audio	Controller	Realtek® ALC887 HD Audio Codec	
Super I/O	Controller	Fintek F81866	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	Yes	
TPM	Controller	Pin header	
I/O Interface	USB	8 x USB 2.0 (4 x internal; 4 x rear) 1 x USB 3.0 (internal)	
	Serial	6 x COM (COM1~2: rear; COM3~6: internal) COM1: RS-232/422/485, 0V/5V/12V COM 2~6: RS232, 0V/5V/12V	
	PS/2	1 (Pin header)	
	GPIO	8-bits (4 x GPI, 4 x GPO), 5V	
Expansion Slot	PCI	1	
	Mini-PCIe	1 x Full-size, mSATA	
Storage	SATA	1 x SATA 2.0	
	mSATA	1	
Power Supply	DC	DC-in 12V/19V/24V	
	ATX	ATX-Power 20P	
Environment	Operating Temperature	0 ~ 60°C	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20 ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)	
	Weight	0.37 Kg	
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI	

Features

- Support Intel® Bay Trail Quad Core 1.8GHz/2GHz Processor
- Multiple video outputs: HDMI, VGA, and LVDS
- Intel® Gen7 graphics technology
- Optional DC/ATX power input by BOM
- Low power and fanless design

Ordering Information

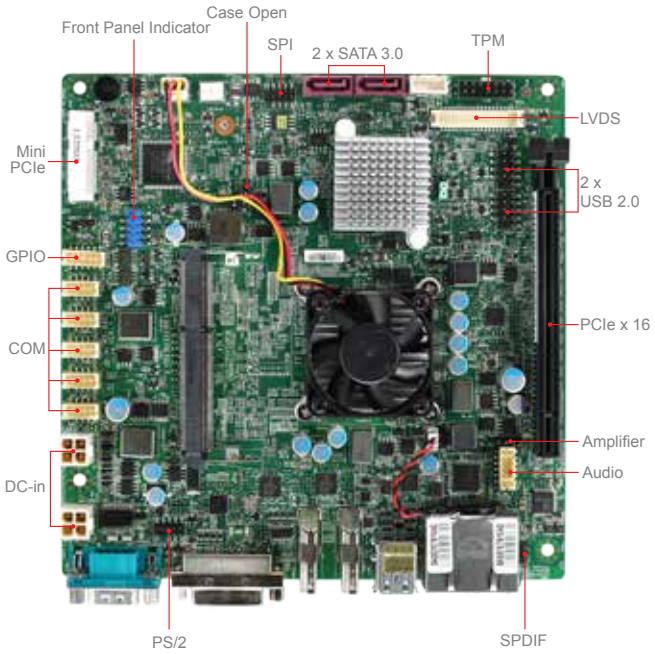
Part Number	Description
919-98E3-001	MS-98E3 10 Intel Bay Trail D sku-J1900, DC,1*Mini PCI_E+2*DDR3L SO DIMM,1*PCI, 1*mini PCIe (with msata function), 8*USB 2.0, 1*USB 3.0,6*COM
919-98E3-002	MS-98E3 10 OPT: A Intel Bay Trail D sku-J1900, ATX-,1*Mini PCI_E+2*DDR3L SO DIMM,1*PCI, 1*mini PCIe (with msata function), 8*USB 2.0, 1*USB 3.0,6*COM
919-98E3-003	MS-98E3 10 OPT: B, Intel Bay Trail M sku-N2920, DC, 1*Mini PCI_E+2*DDR3L SO DIMM,1*PCI, 1*mini PCIe (with msata function), 8*USB 2.0, 1*USB 3.0,6*COM

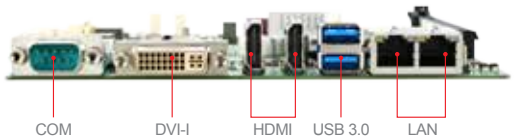
Packing List

Part Number	Description	Quantity
K10-3004215-V03	DC power cable	1
K1D-1012064-V03	SATA cable	1
E21-98E3010-C22	I/O shield	1
G71-SEDC113-X03	Driver CD	1

MS-98E0

Intel® Ivy Bridge Platform with Low Profile Design and Multi-displays





NEW

Specifications

Processor	CPU	Intel® Core™ i7/i5/i3/Celeron Mobile Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	BGA
	Chipset	Intel® QM77/HM76 Express
	BIOS	AMI
Memory	Technology	Dual-channel DDR3/DDR3L 1066/1333/1600MHz
	Max. Capacity	Up to 16GB
	Socket	2 x 204-pin SO-DIMMs
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	LVDS	Dual channel 18/24-bit
	DVI	1 (DVI-I)
	HDMI	2
	Multiple Display	2 independent displays (SNB CPU only) 3 independent displays (IVB CPU only)
	Display Mode	LVDS up to 1920 x 1200 DVI-I up to 1920 x 1200 HDMI up to 1920 x 1200
Ethernet	Controller	1 x Intel® 82579LM GbE LAN PHY 1 x Intel® I210-AT GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866AD-I
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Pin header
I/O Interface	USB	4 x USB 2.0 (4 x internal) 2 x USB 3.0 (2 x rear)
	Serial	6 x COM (COM1: rear; COM2~6: internal) COM1~2: RS-232/422/485, 0V/5V/12V COM3~6: RS-232, 0V
	PS/2	1 (pin header)
	GPIO	8-bits (4 x GPI; 4 x GPO), 3V/5V
Expansion Slot	PCIe x16	1
	Mini-PCIe	2 x Full-size (1 w/ mSATA function, 1 w/ SIM holder)
Storage	SATA	2 x SATA 3.0
	mSATA	1
Power Supply	DC	DC-in 12V
	ATX	N/A
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.37 Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Support Intel® Ivy Bridge and Sandy Bridge Mobile series CPU
- DC low profile design
- Great 3D graphic performance with high definition up to 1080p
- Support standard and low-voltage DDR3 SO-DIMM memory up to 16GB
- Support 3 independent displays with multiple video interfaces (HDMI+HDMI+DVI)
- Support DirectX11, Shader Model 4.0, and Intel Clear Video Technology

Ordering Information

Part Number	Description
919-98E0-001	MS-98E0 VER 10 INTEL IVY BRIDGE+INTEL HM76+2*DDR3+2*GBE LAN+1*DC CABLE+1X2*COM CABLE+1*SATA POWER

Packing List

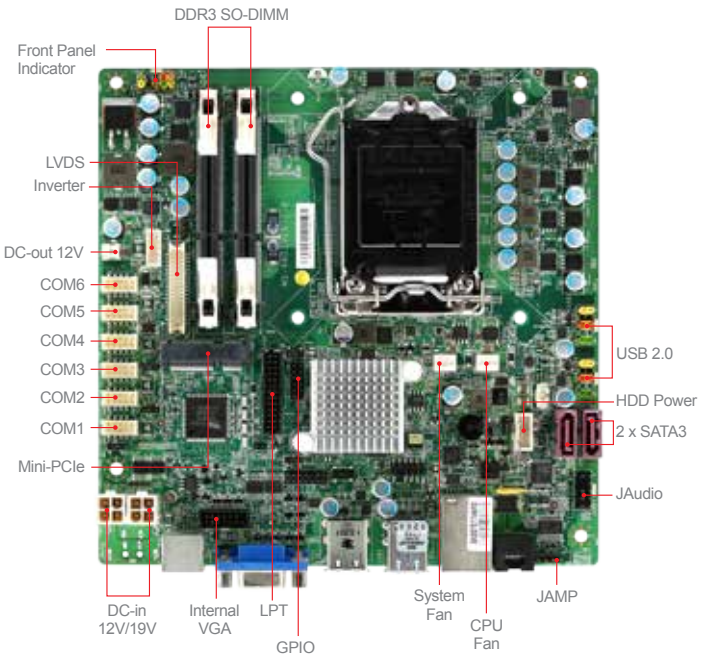
Part Number	Description
E21-98E0010-C22	I/O SHIELD
G71-SEDC104-J24	Driver DVD
K10-3002137-V03	DC CABLE
K1D-3008006-V03	SATA POWER CABLE,
K14-1018003-V03	COM PORT CABLE with BRACKET

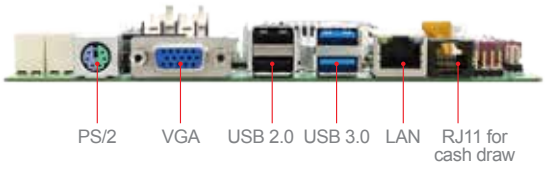
MSI reserves the right to change the specifications without prior notices.

MS-98D3

Intel® 4th Gen H81 Thin Mini-ITX Solution for High-performance POS Application

NEW





Specifications

Processor	CPU	4th Gen Intel® Desktop H3 Core i7/i5/i3/ Celeron Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket (LGA 1150)
	Chipset	Intel® H81 Express
	BIOS	AMI
Memory	Technology	Dual-channel DDR3/DDR3L 1066/1333/1600 MHz
	Max. Capacity	Up to 16GB
	Socket	2 x 204-pin SO-DIMMs
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	LVDS	Dual channel 24-bit (add chrontel 7511B chipset)
	VGA	1 x rear I/O; 1 x internal
	Multiple Display	2 independent displays
	Display Mode	VGA up to 1920 x 1200 LVDS up to 1920 x 1080
Ethernet	Controller	1 x Realtek® RTL8111-E-VL-CG GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866AD-I
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Pin header
I/O Interface	USB	6 x USB 2.0 (4 x internal; 2 x rear) 2 x USB 3.0 (2 x rear)
	Serial	6 x COM (internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V (selected by BIOS) COM5~6: RS-232, without power (COM1 & COM2 support WOR)
	Parallel	1
	PS/2	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	Mini-PCIe	1 x Full-size, mSATA
Storage	SATA	2 x SATA 3.0
	mSATA	1
Power Supply	DC	DC-in 12V/19V DC-out 12V-2P
	ATX	N/A
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.33Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Standard thin Mini-ITX form factor (low-profile)
- COM1 to COM4 support power selection by BIOS instead of jumper (easy to configure)
- Multiple video outputs: VGA, LVDS, and internal VGA
- Support DC-12V out for second monitor (for POS application)
- DC-in 12V/19V auto-switch
- Support cash drawer with RJ11 (for POS application)

Ordering Information

Part Number	Description
919-98D3-002	MS-98D3\MS-98D3\609-98D3-020\809-98D3-003\ STD MS-98D3\NA VER 10 OPT B FOR CHANNEL SHIPPMENT SINGLE

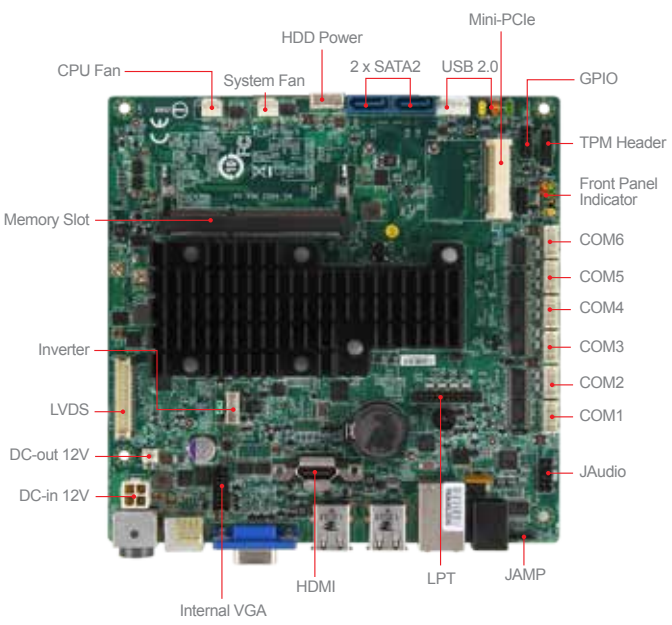
Packing List

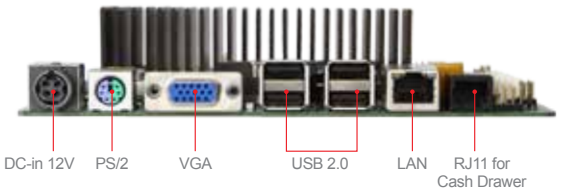
Part Number	Description
K14-1018003-V03	COM PORT CABLE,300mm,2*5pin,,2.0mm,
K1D-1008261-V03	SATA CABLE,SIGNAL,
K1D-3008006-V03	SATA CABLE,POWER,
E21-98D3010-C22	IO SHIELD FOR MS-98D3

MS-98D2

Low Power and Thin Mini-ITX with Intel® Atom Solution for POS Applications

NEW





Specifications

Processor	CPU	Intel® Atom™ Processor D2550, Dual Core
	Frequency	1.86GHz
	L2 Cache	1 MB
	CPU Type	BGA
	Chipset	Intel® NM10 Express
	BIOS	AMI
Memory	Technology	Single-channel DDR3 1067MHz
	Max. Capacity	Up to 4 GB
	Socket	1 x 204-pin SO-DIMM
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 759 MB SDRAM
	LVDS	Singlel channel 18/24-bit
	VGA	1 x rear I/O; 1 x internal
	Multiple Display	2 independent displays
	Display Mode	VGA up to 1920 x 1200 LVDS up to 1440 x 900
Ethernet	Controller	1 x Realtek® RTL8111-E-VL-CG GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866AD-I
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
TPM	Controller	Pin header
I/O Interface	USB	7 x USB 2.0 (4 x rear; 3 x internal)
	Serial	6 x COM (internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V (selected by BIOS) COM5~6: RS-232, without power (COM1 & COM2 support WOR)
	Parallel	1
	PS/2	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	Mini-PCIe	1 x Full-size
Storage	SATA	2 x SATA 2.0
Power Supply	DC	DC-in 12V/19V DC-out 12V-2P
	ATX	N/A
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.42Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Standard thin Mini-ITX form factor (low-profile)
- COM1 to COM4 support power selection by BIOS (more user friendly without the need to remove chassis)
- Multiple video outputs: VGA, LVDS, and internal VGA
- Support DC 12V out for second monitor (for POS application)
- Lockable DC-in 12V (Mini-DIM type power jack)
- Support cash drawer with RJ11 (for POS application)

Ordering Information

Part Number	Description
919-98D2-001	MS-98D2\MS-98D2\609-98D2-010\809-98D2-001\MS-98D2 VER 11 STANDARD FOR SHIPPING SINGLE

Packing List

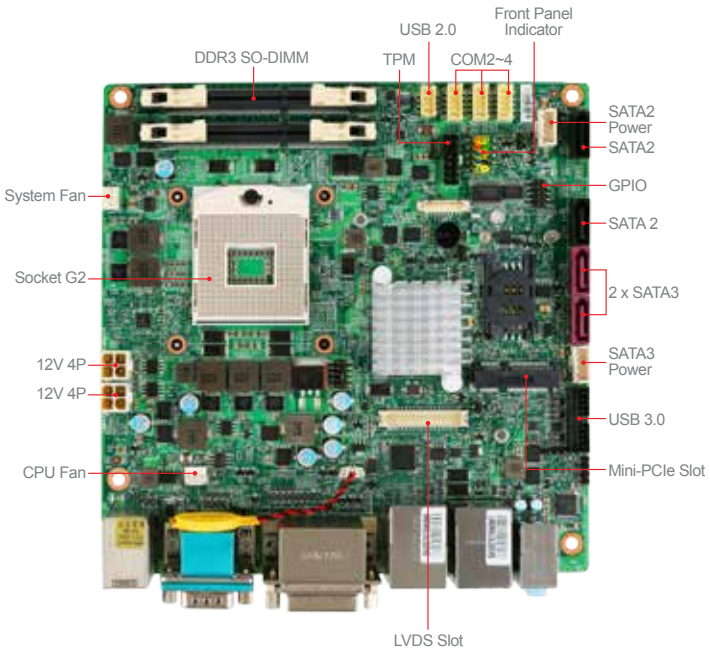
Part Number	Description
K14-1018003-V03	COM PORT CABLE,300mm,2*5pin,,2.0mm,
K1D-3008006-V03	SATA CABLE,POWER
K1D-1008055-E06	SATA CABLE,SIGNAL
E21-98D2010-C22	IO SHIELD FOR MS-98D2

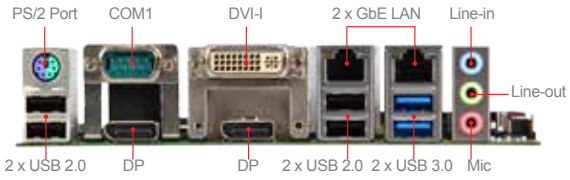
MSI reserves the right to change the specifications without prior notices.

MS-98C8

Intel® QM77/HM76 Platform (supporting SNB/IVB Processor) with Multi-displays

NEW





Specifications

Processor	CPU	3rd Gen Intel® Core™ Mobile Processor (optional)
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket G2 (rPGA 989)
	Chipset	Intel® QM77/HM76 Express
	BIOS	AMI
Memory	Technology	Dual-channel DDR3 1600/1333MHz
	Max. Capacity	Up to 16GB
	Socket	2 x 204-pin SO-DIMMs
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	LVDS	Dual channel 18/24-bit
	DVI	1 (DVI-I)
	DisplayPort	2
	Multiple Display	2 independent displays (SNB CPU only) 3 independent displays (IVB CPU only)
	Display Mode	LVDS up to 1920 x 1200 DP up to 2560 x 1600 DVI-I up to 1920 x 1200
Ethernet	Controller	1 x Intel® 82579 PHY GbE LAN 1 x Intel® I210-AT PCIe GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866D
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Pin header
I/O Interface	USB	6 x USB 2.0 (4 x rear; 2 x internal) 4 x USB 3.0 (2 x rear; 2 x internal)
	Serial	4 x COM (COM1: rear; COM2~4: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V
	PS/2	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
	Mini-PCIe	1 x Full-size 1 x Half-size, mSATA
Storage	SATA	2 x SATA 3.0 2 x SATA 2.0
	mSATA	1
Power Supply	DC	DC-in 12V/19V
	ATX	N/A
Environment	Operating Temperature	0 ~ 70°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.35 Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Support Intel® Ivy Bridge and Sandy Bridge Mobile series CPU
- Support standard and low-voltage DDR3 SO-DIMM memory up to 16GB (for Ivy Bridge only)
- Multiple video outputs: DP, DP, DVI-I, LVDS with 3 independent displays supported (for Ivy Bridge only)
- Great 3D graphic performance with high definition up to 1080p
- Support DirectX 11
- Support SATA 3.0 and mSATA by mini-PCIe slot

Ordering Information

Part Number	Description
919-98C8-003	HM76 2*DDR3 SODIMM, 2*miniPCIe, 2*LAN, 1*DVI-I, 2*DP, 1*LVDS, 4*com port, 6*USB 2.0, 4*USB 3.0
919-98C8-004	QM77 2*DDR3 SODIMM, 2*miniPCIe, 2*LAN, 1*DVI-I, 2*DP, 1*LVDS, 4*com port, 6*USB 2.0, 4*USB 3.0

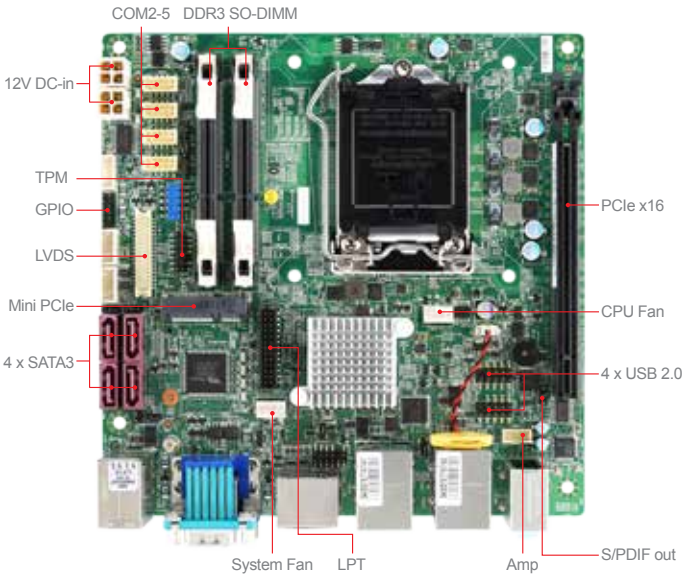
Packing List

Part Number	Description
E21-98C8010-C22	I/O SHIELDING
E32-0800383-A21	MECH FANSINK
K39-3002004-V03	PS2 Y-CABLE
K14-1018003-V03	COM PORT CABLE
K1D-1012064-V03	SATA CABLE
E93-0000118-H06	CPU BACK PLATE

MS-98C7

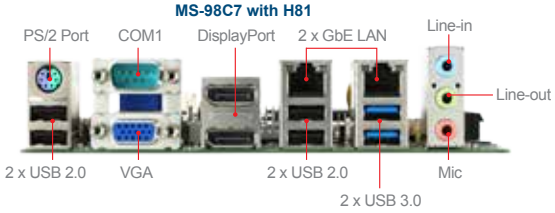
Intel® 4th Gen Q87/H81 Platform with Multi-displays

NEW



MS-98C7 with Q87

MS-98C7 with H81



Specifications

Processor	CPU	4th Gen Intel® Desktop H3 Core i7/i5/i3/ Celeron Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket (LGA 1150)
	Chipset	Intel® Q87/H81 Express
	BIOS	AMI
Memory	Technology	Dual-channel DDR3/DDR3L 1066/1333/1600MHz
	Max. Capacity	Up to 16GB
	Socket	2 x 204-pin SO-DIMMs
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	LVDS	Dual channel 24-bit (add chrontel 7511B chipset)
	VGA	1
	DisplayPort	2
	Multiple Display	2 independent displays (H81 SKU) 3 independent displays (Q87 SKU)
	Display Mode	LVDS up to 1920 x 1200 VGA up to 1920 x 1200 DP up to 3840 x 2160
Ethernet	Controller	1 x Intel® I217-LM GbE PHY (iAMT 9.0 supported) 1 x Intel® I210-AT PCIe GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866D
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Pin header
I/O Interface	USB	Q87: 6 x USB 2.0 (4 x internal; 2 x rear); 4 x USB 3.0 (rear) H81: 6 x USB 2.0 (2 x internal; 4 x rear); 2 x USB 3.0 (rear)
	Serial	5 COM (COM1: rear; COM2~5: internal) COM1: RS-232/422/485, 0V/5V/12V COM2: RS-232, w/ WOR function COM3~5: RS-232, 0V/5V/12V
	Parallel	1 (Pin header)
	PS/2	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCIe x16	1 (up to 75W)
	Mini-PCIe	1 x Full-size, mSATA 1 x Half-size
Storage	SATA	Q87: 4 x SATA 3.0 H81: 2 x SATA 3.0; 1 x SATA 2.0
	mSATA	1
Power Supply	DC	DC-in 12V
	ATX	N/A
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.37 Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- 4th Gen Intel® Core™ processors w/ Intel® 8 series chipset (formerly codename Haswell)
- 3 independent displays with multiple interfaces: VGA, LVDS, and dual DisplayPorts
- Support DDR3\DDR3L memory up to 16GB
- Support dual Intel® GbE LAN

Ordering Information

Part Number	Description
919-98C7-003	MS-98C7 10 Mini-ITX, Q87, Haswell Mbl, 2x DDR3 SO-DIMM, LVDSx1/VGAx1/DPx2, 4x SATA III,2x GbE LAN,10x USB,5xCOM DC Power (ROHS)
919-98C7-004	MS-98C7 10 OPT A Mini-ITX, H81, Haswell Mbl, 2x DDR3 SO-DIMM, LVDSx1/VGAx1/DPx2, 2x SATA III,1xSATA II, 2x GbE LAN,8x USB,5xCOM DC Power (ROHS)

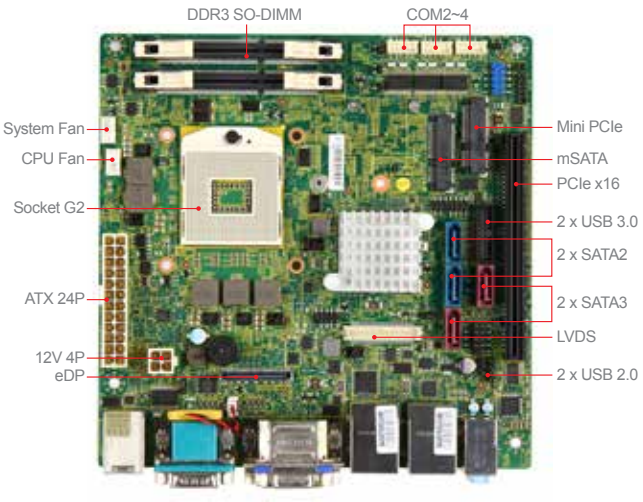
Packing List

Part Number	Description
E21-98C7010-C22	I/O shield
K14-1018003-V03	INT COM PORT CABLE
K1D-1008261-V03	INT SATA CABLE,SIGNAL
K1D-3008006-V03	INT SATA CABLE,POWER,
K39-3002004-E06	PS2 Y-CABLE

MSI reserves the right to change the specifications without prior notices.

MS-9899 V1.1

Intel® QM77/HM76 Platform (Supporting SNB/IVB Processor) with Multi-displays



MS-9899 with QM77

MS-9899 with HM76

Features

- Support Intel® Ivy Bridge and Sandy Bridge Mobile series CPU
- Support standard and low-voltage DDR3 SO-DIMM memory up to 16GB
- 5 types of display interface: VGA, HDMI, DVI, LVDS, and embedded DisplayPorts
- Support SATA 3.0, mSATA, and CFast slots

Ordering Information

Part Number	Description
919-9899-001	MS-9899 QM77, SNB/IVB Mbl, 2x DDR3 SO-DIMM, VGA/DVI-D/HDMI,
	4x SATA,2x GbE LAN,10x USB,4xCOM ATX Power (ROHS)
919-9899-002	MS-9899 HM76, SNB/IVB Mbl, 2x DDR3 SO-DIMM, VGA, 4x SATA,
	1x GbE LAN,10x USB,4xCOM ATX Power (ROHS)
919-9899-003	MS-9899 QM77, SNB/IVB Mb, 2x DDR3 SO-DIMM, VGA/DVI-D/HDMI,
	4x SATA, 2x GbE LAN, 10x USB, 4xCOM, No CFast, ATX Power (ROHS)

Packing List

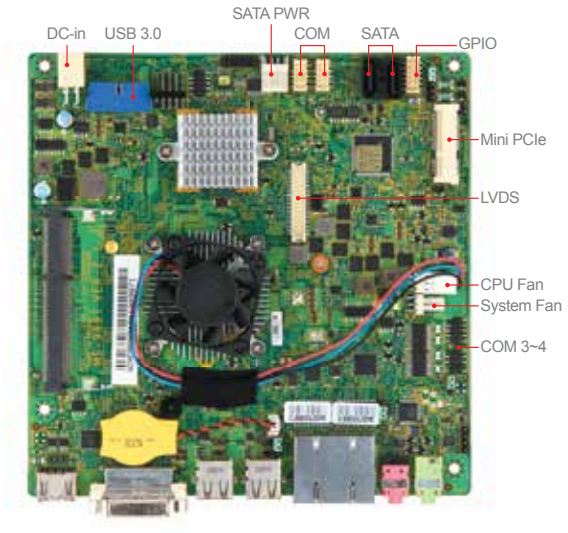
Part Number	Description
E32-0800383-A21	FANSINK,60*60*25mm
K1D-1008132-V03	SATA CABLE,
E21-9899010-C22	I/O shield for QM77
E21-9899020-C22	I/O shield for HM76
E93-0000039-H06	RETENTION BACKPLATE
K14-1018003-V03	COM PORT CABLE
K39-3002004-E06	PS2 Y-CABLE

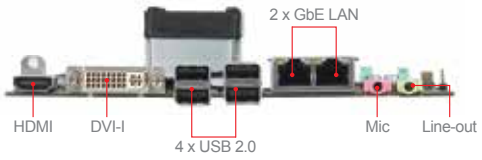
Specifications

Processor	CPU	Intel® Core™ i7/i5/i3 Mobile Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket G2 (rPGA 989)
	Chipset	Intel® QM77/HM76 Express
	BIOS	AMI
Memory	Technology	Dual-channel DDR3/DDR3L 1066/1333/1600MHz
	Max. Capacity	Up to 16GB
	Socket	2 x 204-pin SO-DIMMs
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	LVDS	Dual channel 24-bit
	eDP	1 (Pin header; only for QM77)
	VGA	1
	DVI	1 (DVI-D; only for QM77)
	HDMI	1 (only for QM77)
	Multiple Display	2 Independent displays (SNB CPU only) 3 Independent displays (IVB CPU only)
	Display Mode	LVDS up to 1920 x 1200 eDP up to 1920 x 1200 DVI-D up to 2560 x 1600 VGA up to 2560 x 1600 HDMI up to 2560 x1600
Ethernet	Controller	1 x Intel® 82579LM GbE LAN PHY iAMT 8.0 (QM77 only) 1 x Intel® 82583V GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866D
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Pin header
I/O Interface	USB	4 x USB 3.0 (2 x rear; 2 x internal) 6 x USB 2.0 (4 x rear; 2 x internal)
	Serial	4 x COM (COM1: rear; COM2~4: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V (no power selection jumper for HM76)
	PS/2	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCIe x16	1
	Mini-PCIe	1
Storage	SATA	2 x SATA 3.0; 2 x SATA 2.0
	CFast	1 (QM77 only)
	mSATA	1
Power Supply	DC	N/A
	ATX	ATX-Power 24P, 12V-4P
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.37 kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

MS-9897 V2.3

Intel® HM76 Platform (Supporting SNB/IVB Processor) with Multi-displays





Specifications

Processor	CPU	3rd Gen Intel® Core™ Mobile Processor (optional)
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	BGA
	Chipset	Intel® HM76/HM65
	BIOS	AMI
Memory	Technology	Dual-channel DDR3 1066/1333/1600MHz
	Max. Capacity	Up to 8GB
	Socket	2 x 204-pin SO-DIMMs
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	LVDS	Dual channel 18/24-bit
	DVI	1 (DVI-I)
	HDMI	1
	Multiple Display	2 Independent displays (SNB CPU only) 3 Independent displays (IVB CPU only)
	Display Mode	LVDS up to 1920 x 1200 HDMI up to 1920 x 1200 DVI-I up to 1920 x 1200
Ethernet	Controller	1 x Intel® 82579LM GbE LAN PHY 1 x Intel® I210AT GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866D
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Infineon SLB9635TT1.2
I/O Interface	USB	2 x USB 3.0 (internal; for IVB CPU only) 4 x USB 2.0 (rear)
	Serial	4 x COM (internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V
	GPIO	8-bits (4 x GPI; 4 x GPO), 3V/5V
Expansion Slot	Mini-PCIe	1 x Full-size 1 x Half-size, mSATA
Storage	SATA	2 x SATA 2.0
	mSATA	1
Power Supply	DC	DC-in 12V/19V
	ATX	N/A
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.37 Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Support Ivy Bridge and Sandy Bridge Mobile Series CPU
- Support TPM 1.2
- Great 3D graphic performance with high definition up to 1080p
- Support 3 independent displays with multiple video interfaces (HDMI, DVI-I, LVDS)
- Support DirectX11, Shader Model 4.0 and Intel® Clear Video Technology

Ordering Information

Part Number	Description
919-9897-002	MS-9897 VER 22 Ivy Bridge i5- 3337U+HM76 2*DDR3 SODIMM, 2*miniPCIe, 2*LAN, 1*DVI-I, 1*HDMI, 4*com port, 4*USB 2.0, 2*USB 3.0
919-9897-003	MS-9897 VER 22 Sandy Bridge 827E+HM65 2*DDR3 SODIMM, 2*miniPCIe, 2*LAN, 1*DVI-I, 1*HDMI, 4*com port, 4*USB 2.0

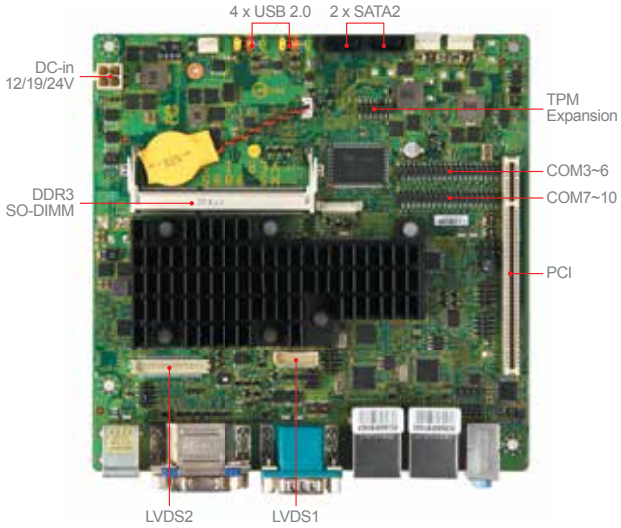
Packing List

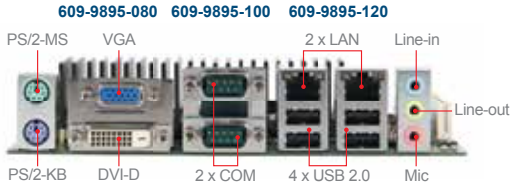
Part Number	Description
K14-1018003-V03	COM PORT CABLE
K1D-1012007-V03	SATA CABLE
K10-3002137-V03	DC CABLE
G71-SEDC084-J24	DRIVER CD

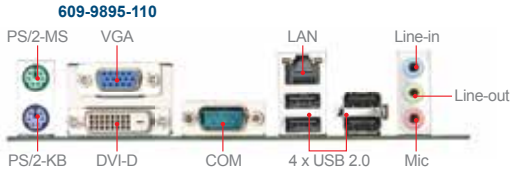
MSI reserves the right to change the specifications without prior notices.

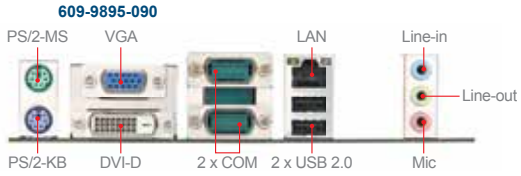
MS-9895 V1.5

Mini-ITX with Full-HD Performance of Blu-ray Playback









Features

- Intel® Atom™ D2550/N2800/N2600 processor
- Support 1080P full-HD display
- Support DVI output
- Hardware Video Decoder for Blu-ray playback
- 10 x COM ports for mutil-applications

Ordering Information

Part Number	Description
919-9895-008	N2800, 1*mSATA, 8*USB2.0, 2*LAN, 6*COM,DC-In 12V POWER, SINGLE PACKING
919-9895-009	N2600, 6*USB2.0, 1*LAN, 6*COM,DC-In 12V POWER, SINGLE PACKING
919-9895-010	D2550, 1*mSATA, 8*USB2.0, 2*LAN, 10*COM,DC-In 12V/19V/24V POWER, SINGLE PACKING
919-9895-011	D2550, 8*USB2.0, 1*LAN, 5*COM,DC-In 12V POWER, SINGLE PACKING
919-9895-012	D2550, 8*USB2.0, 2*LAN, 6*COM,DC-In 12V POWER, SINGLE PACKING

Packing List

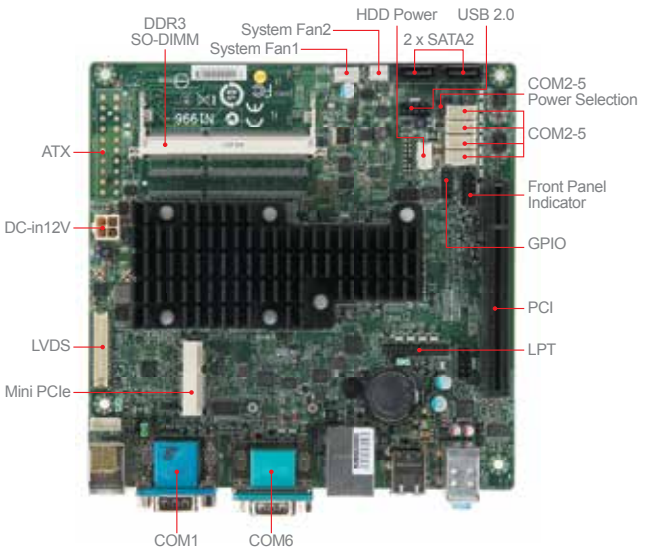
Part Number	Description	Quantity
E21-9895050-C22	I/O SHIELDING	1
K10-3002137-V03	DC CABLE	1
K14-1036004-V03	COM PORT CABLE	1

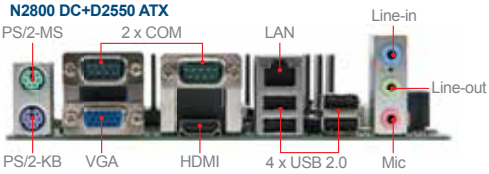
Specifications

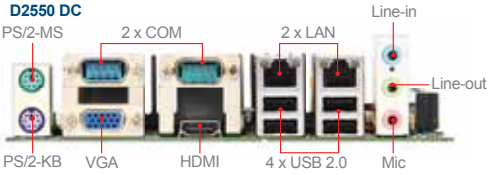
Processor	CPU	Intel® Atom™ Processor D2550/N2800/ N2600, Dual Core
	Frequency	1.86GHz/1.6GHz
	L2 Cache	1MB
	CPU Type	BGA
	Chipset	Intel® NM10 Express
	BIOS	AMI
Memory	Technology	Single-channel DDR3 1066MHz
	Max. Capacity	Up to 4 GB (D2550/N2800) Up to 2 GB (N2600)
	Socket	1x 204-pin SO-DIMM
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 759 MB SDRAM
	LVDS	2 x LVDS Daul channel 24-bit (add chrontel 7511B chipset) Single channel 18/24-bit
	VGA	1
	DVI	1 (DVI-D)
	Multiple Display	2 independent displays
	Display Mode	VGA up to 1920 x 1080 DVI-D up to 2560 x 1200 LVDS up to 1920 x 1080
Ethernet	Controller	2 x Intel® 82574L GbE LAN (D2550/ N2800) 1 x Intel® 82574L GbE LAN (N2600)
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Finteck F81865-I + F81216
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
TPM	Controller	Pin header
I/O Interface	USB	8 x USB 2.0 (4 x rear; 4 x internal for D2550/N2800 SKU) 6 x USB 2.0 (2 x Rear, 4 x Internal for N2600 SKU)
	Serial	10 x COM (COM1~2: rear; COM3~10: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~10: RS-232, 0V/5V/12V
	PS/2	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCI	1
	Mini-PCIe	1 x Full-size, mSATA
Storage	SATA	2 x SATA 2.0
	mSATA	1
Power Supply	DC	DC-in 12V /19V / 24V (P/N: 919-9895-010 only) DC-in 12V for other P/N
	ATX	N/A
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	0 ~ 95%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	Mini-ITX(170mmX170mm)
	Weight	0.42Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

MS-9893 V1.2

Low Power Intel® Atom™ Solution







Features

- Intel® Atom™ D2550 Dual Core CPU to maximize performance
- Support DDR3 SO-DIMM up to 1066MHz
- One Mini-PCIe with mSATA storage function supported
- 2 independent displays with VGA/HDMI/LVDS
- Optional DC/ATX power input by BOM

Ordering Information

Part Number	Description
919-9893-007	MS-9893\MS-9893\609-9893-070\809-9893-004\STD MS-9893 VER 1.1 OPT D FOR CHANNEL 9893 ATX POWER BOARD SINGLE
919-9893-008	MS-9893\MS-9893\609-9893-080\809-9893-005\STD MS-9893 VER 12 OPT H 08S I/O SHIELDING CHANGE TO 2* (LAN+2USB) SINGLE
919-9893-009	MS-9893\MS-9893\609-9893-090\809-9893-003\STD MS-9893 VER 1.1 OPT E FOR CHANNEL 9893 DC POWER BOARD SINGLE

Packing List

809-9893-003

Part Number	Description	Quantity
K1D-1012033-V03	SATA CABLE,SIGNAL/POWER	1
E21-9893010-C22	I/O SHIELDING	1
K10-3004215-V03	DC POWER TO 2*2P HSG/FOR MS-9887	1
K14-1018003-V03	COM PORT CABLE	1

809-9893-004

Part Number	Description	Quantity
K1D-1008055-E06	SATA CABLE,SIGNAL	1
K1D-1008269-V03	SATA CABLE,SIGNAL	1
K14-1018003-V03	COM PORT CABLE	1
E21-9893010-C22	I/O SHIELDING	1

Specifications

Processor	CPU	Intel® Atom™ Processor D2550/N2800, Dual Core
	Frequency	1.86GHz
	L2 Cache	1 MB
	CPU Type	BGA
	Chipset	Intel® NM10 Express
	BIOS	AMI
Memory	Technology	Single-channel DDR3 1067MHz
	Max. Capacity	Up to 4 GB
	Socket	1 x 204-pin SO-DIMM
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 759 MB SDRAM
	LVDS	Singlel channel 18/24-bit
	VGA	1 x rear I/O
	HDMI	1
	Multiple Display	2 independent displays
	Display Mode	VGA up to 1920 x 1200 LVDS up to 1440 x 900 HDMI up to 1920 x 1200
Ethernet	Controller	2 x Realtek® RTL8111-E-VL-CG GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Finteck F81865-I
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
TPM	Controller	Pin header
I/O Interface	USB	6 x USB 2.0 (2 x internal, 4 x rear I/O)
	Serial	6 x COM (COM1&6: rear; COM2~5: internal) COM1: RS-232/422/485, 0V/5V/12V, with WOR function COM2~5: RS-232 pin header, 0V/5V/12V COM6: RS-232, 0V/5V/12V
	Parallel	1
	PS/2	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCI	1
	Mini-PCIe	1 x Full-size, mSATA
Storage	SATA	2 x SATA 2.0
	mSATA	1
Power Supply	DC	DC-in 12V for D2550/N2800 SKU
	ATX	ATX-Power 20P for D2550 SKU only
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.42Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

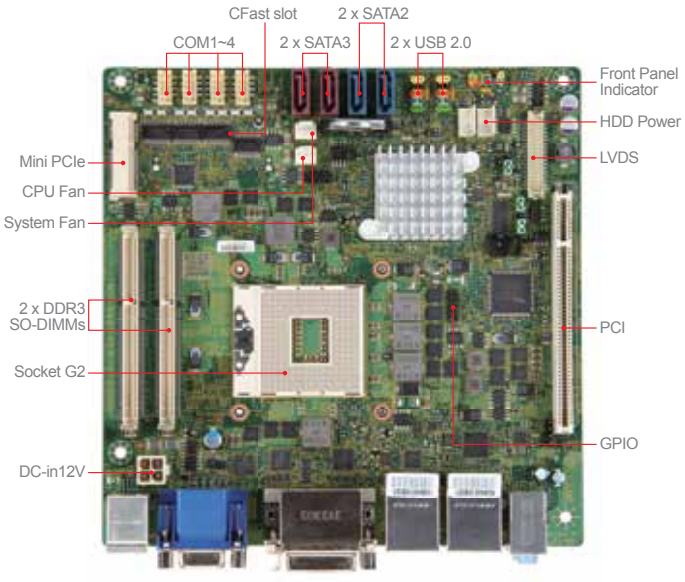
809-9893-005

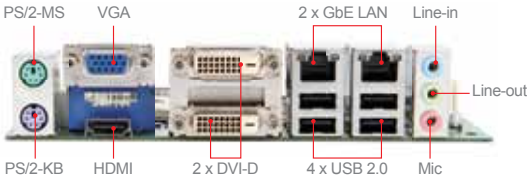
Part Number	Description	Quantity
E21-9893020-C22	I/O SHIELDING FOR MS-9893	1
K10-3004215-V03	DC POWER TO 2*2P HSG FOR MS-9887	1
K14-1018003-V03	COM PORT CABLE	1
K1D-1012033-V03	SATA CABLE,SIGNAL/POWER	1

MSI reserves the right to change the specifications without prior notices.

MS-9887

Intel® Huron River Platform (Sandy Bridge Processor) with Multi-displays





Specifications

Processor	CPU	Intel® Core™ i7/i5/i3 Mobile Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket G2 (rPGA-989)
	Chipset	Intel® QM67 Express (wth iAMT 7.0) Intel® HM65 Express (without iAMT function)
	BIOS	AMI
Memory	Technology	Dual-channel DDR3 1066/1333/1600MHz
	Max. Capacity	Up to 16 GB
	Socket	2 x 204-pin SO-DIMMs
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	LVDS	Dual channel 18/24-bit
	VGA	1
	DVI	2 (DVI-D)
	HDMI	1
	Multiple Display	2 independent displays
	Display Mode	LVDS up to 1920 x1080 VGA up to 1920 x 1080 DVI-D up to 2560 x 1600 HDMI up to 1920 x 1200
Ethernet	Controller	1 x Intel® 82579LM GbE LAN PHY 1 x Intel® 82574L GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F71889AD
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Infineon SLB9635TT1.2
I/O Interface	USB	8 x USB 2.0 (4 x rear; 4 x internal)
	Serial	4 x COM (internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V
	PS/2	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCI	1
	Mini-PCIe	1 x Full-size
Storage	SATA	2 x SATA 3.0; 2 x SATA 2.0 (support RAID 0, 1, 5, 10)
	CFast	1
Power Supply	DC	DC-in 12V
	ATX	N/A
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.32 kg
Certification	EMC	FCC Class A, CE, C-Tick, VCCI, BSMI

Features

- Intel® Socket G2 Core i3/i5/i7 processor
- 12V DC power input
- Support iAMT 7.0
- Support SATA RAID 0/1/5/10
- AMI UEFI BIOS supported
- Dual independent displays w/ multiple display ports

Ordering Information

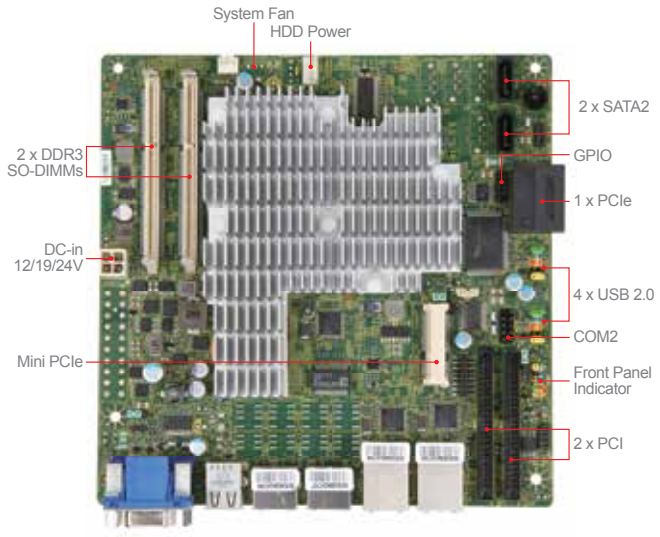
Part Number	Description
919-9887-001	MS-9887 /QM67,2 x DDR3 SO-DIMM,2 x SATA 2.0,2 x SATA 3.0,1 x CFast Card,2xGbE LAN,8 x USB,4x-COM,DC power
919-9887-002	MS-9887 /HM65, 2*DDR3, 2*GLAN, 2*SATA CABLE, 2*SATA POWER CABLE

Packing List

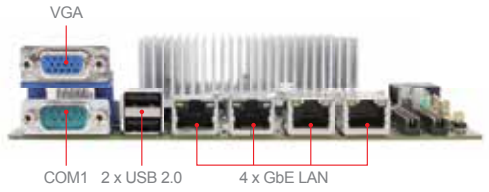
Part Number	Description	Quantity
G71-SEDC049-J24	PACK CD	1
E32-0800381-A21	MECH FANSINK	1
G18-S100083-E66	PACK ACCESSORY BOX	1
K14-1018003-V03	COM PORT CABLE	1
E21-9887010-C22	I/O SHEILDING	1
E93-0000039-H06	RETENTION BACKPLATE	1

MS-9877

Intel® Atom™ D525 Processor for Networking Applications



TAIWAN EXCELLENCE 2011



Specifications

Processor	CPU	Intel® Atom™ Processor D525, Dual Core
	Frequency	1.8GHz
	L2 Cache	1MB
	CPU Type	BGA
	Chipset	Intel® ICH9R
	BIOS	AMI
Memory	Technology	Dual-channel DDR3 800MHz
	Max. Capacity	Up to 4GB
	Socket	2 x 204-pin SO-DIMMs
Display	Controller	Intel® GMA3150 Graphics
	Graphic Memory	Shared system memory up to 384 MB SDRAM
	VGA	1
	Multiple Display	Single display
	Display Mode	VGA up to 1920 x 1200
Ethernet	Controller	4 x Intel® 82574L PCIe LAN (optional by-pass function for 2 LAN)
Audio	Controller	N/A
Super I/O	Controller	Fintek F71882FG
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
I/O Interface	USB	6 x USB 2.0 (2 x rear; 4 x internal)
	Serial	2 x COM (COM1: rear; COM2: internal) COM1: RS-232/422/485, 0V COM2: RS-232, 0V
	GPIO	8-bits (4 x GPI; 4 x GPO), 3V/5V
Expansion Slot	PCIe x1	1
	PCI	2
	Mini-PCIe	1 x Full-size
Storage	SATA	2 x SATA 2.0
Power Supply	DC	DC-in 12V/19V/24V
	ATX	N/A
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.28 Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Support Intel® Pineview D525/D425 Dual Core CPU to maximize performance
- DDR3 SO-DIMM for better memory capability
- Up to 6 SATA ports for storage-intensive applications
- 2 x LAN with bypass function relay modes (for ATX SKU)
- Wide-range input voltage for DC Sku (12/19/24V)
- Desgined for fanless application
- Extension connector for 2 x PCI slots

Ordering Information

Part Number	Description
609-9877-B10	Mini-ITX/Intel Pineview/Intel ICH9R/IDE x1/SO-DIMM x 2/CF x 1/ATX in
609-9877-B20	Mini-ITX/Intel Pineview/Intel ICH9R/IDE x1/SO-DIMM x 2/CF x 1/DC in

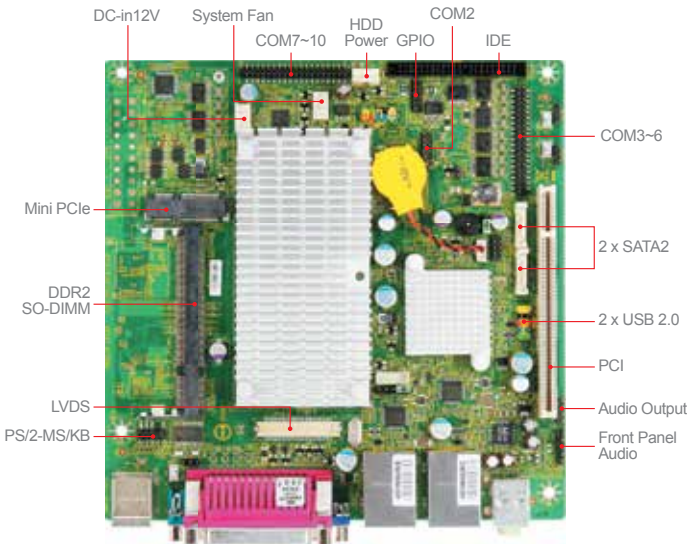
Packing List

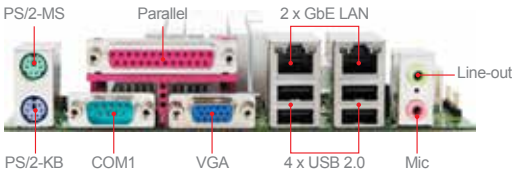
Part Number	Description	Quantity
K1D-1012033-V03	SATA CABLE,SIGNAL/POWER	1
K10-3002137-V03	CABLE,DC CABLE/ROUND	1

MSI reserves the right to change the specifications without prior notices.

MS-9866

Intel® Atom™ N270 Processor for Low Power Solution





Specifications

Processor	CPU	Intel® Atom™ Processor N270
	Frequency	1.6 GHz
	L2 Cache	512K
	CPU Type	BGA
	Chipset	Intel® 945GSE + ICH7M
	BIOS	AMI
Memory	Technology	Single-channel DDR2 400/533 MHz
	Max. Capacity	Up to 2GB
	Socket	1 x 200-pin SO-DIMM
Display	Controller	Intel® GMA950 Graphics
	Graphic Memory	Shared system memory up to 256 MB SDRAM
	LVDS	Daul channel 24-bit
	VGA	1
	Multiple Display	Dual display
	Display Mode	VGA up to 1920 x 1080 LVDS up to 1920 x 1200
Ethernet	Controller	2 x Realtek® RTL8111DL GbE LAN
Audio	Controller	Realtek® ALC662 HD Audio Codec
Super I/O	Controller	Fintek F81865
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
I/O Interface	USB	6 x USB 2.0 (2 x internal; 4 x rear)
	Serial	10 x COM (COM1: rear; COM2~10: internal) COM1: RS-232/422/485 COM 2~10: RS232
	Parallel	1 (Pin header)
	PS/2	2 (1 x rear; 1 x pin header)
	GPIO	8-bits (4 x GPI; 4 x GPO), 3.3V /5V
Expansion Slot	PCI	1
	Mini-PCIe	1 x Full-size
Storage	SATA	2 x SATA 2.0
	IDE	1
Power Supply	DC	DC-in 12V
	ATX	N/A
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.4 Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Intel® Atom™ N270 processor
- 2 x SATA 2.0
- Hardware video decoder for MPEG2
- Hyper-Threading™ supported
- 10 x COM ports for multiple serial applications
- Support dual Gigabit LAN
- Support DC-in 12V

Ordering Information

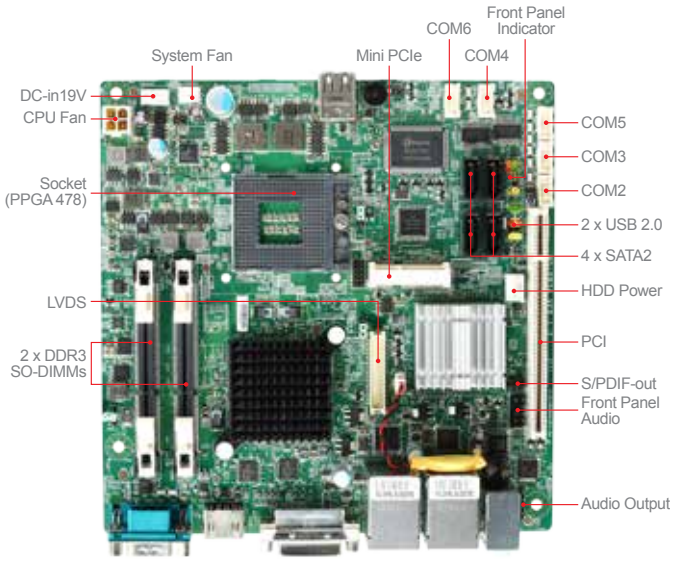
Part Number	Description
919-9866-003	MS-9866 VER 11 OPT:A Atom N270+945GSE+ICH7M ATX,10 Com Port
919-9866-004	MS-9866 VER 11 OPT:B Atom N270+945GSE+ICH7M DC, 10 Com Port

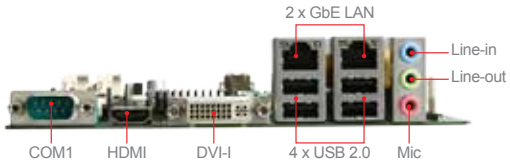
Packing List

Part Number	Description	Quantity
K10-3002126-V03	ROUND CABLE (4pin HSG to DC plug)	1
K12-1080099-E06	ATA CABLE	1
K1D-1008068-E06	SATA CABLE,SIGNAL	1
K12-1080099-V03	ATA CABLE, SIGNAL/POWER	1
K1D-1012033-V03	SATA CABLE, SIGNAL/POWER	1
E21-9866010-C22	I/O SHIELD	1
K14-1036004-V03	COM PORT CABLE	1
G71-SEDC041-J24	Driver CD	1

MS-9834

Trusted Computing with High Performance





Specifications

Processor	CPU	Intel® Core™2 Duo, Celeron™ Moible Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket P
	Chipset	Intel® GM45 + ICH9M-E
	BIOS	AMI
Memory	Technology	Dual-channel DDR3 800/1066MHz
	Max. Capacity	Up to 4 GB
	Socket	2 x 204-pin SO-DIMMs
Display	Controller	Intel® GMA4500 Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	LVDS	Dual channel 18/24-bit
	DVI	1 (DVI-I)
	HDMI	1
	Multiple Display	2 independent displays
	Display Mode	LVDS up to 1920 x1080 DVI-I up to 1920 x 1080 HDMI up to 1920 x 1080
Ethernet	Controller	1 x Intel® 82567LM GbE LAN PHY 1 x Intel® 82574L GbE LAN
Audio	Controller	Realtek® ALC888 HD Audio Codec
Super I/O	Controller	Winbond W83627 DHG
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Infineon SLB9635TT1.2
I/O Interface	USB	8 x USB 2.0 (4 x rear; 4 x internal)
	Serial	6 x COM (COM1: rear; COM2~5: internal) COM1: RS-232, 0V/5V/12V COM2~5: RS-232
Expansion Slot	PCI	1
	Mini-PCIe	1 x Full-size
Storage	SATA	4 x SATA 2.0
Power Supply	DC	DC-in 19V
	ATX	N/A
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.30 kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Support Intel® Core™ 2 Duo Mobile processor
- Support TPM & iAMT 4.0 (optional)
- Multiple video output interfaces: HDMI, DVI-I, LVDS
- Support DirectX® 10 & Intel® Clear Video Technology

Ordering Information

Part Number	Description
919-9834-005	MS-9834 12 Mini-ITX+ GM45/ ICH9M-E

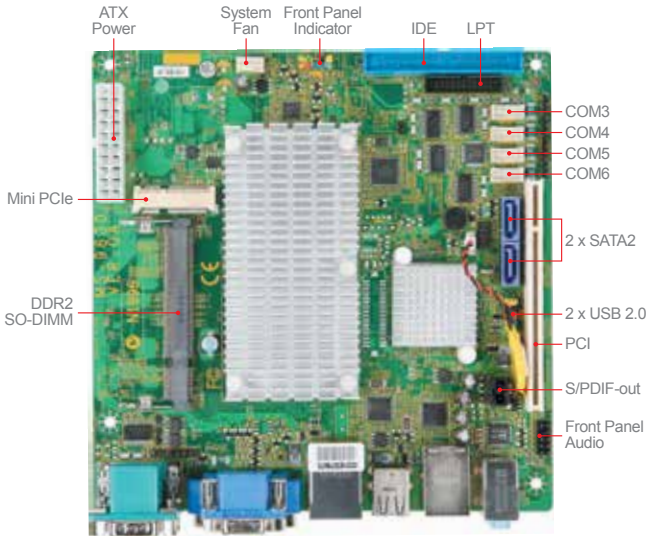
Packing List

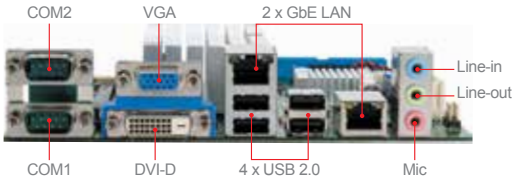
Part Number	Description	Quantity
E32-0900610-C24	FANSINK	1
K1D-1012007-V03	SATA CABLE, SIGNAL/POWER	1
E21-9834010-C22	IO SHIELD	1
G52-98341X1-Q13	USER MANUAL	1
G71-SEDC030-J24	DRIVER CD	1
K10-3002137-V03	DC CABLE	1

MSI reserves the right to change the specifications without prior notices.

MS-9830-A

Intel® Atom™ Solution for Low Power and High Performance with ATX Power





Specifications

Processor	CPU	Intel® Atom™ Processor N270
	Frequency	1.6 GHz
	L2 Cache	512 KB
	CPU Type	BGA
	Chipset	Intel® 945GSE + ICH7M
	BIOS	AMI
Memory	Technology	Single-channel DDR2 400/533MHz
	Max. Capacity	Up to 1 GB
	Socket	1 x 200-pin SO-DIMM
Display	Controller	Intel® GMA950 Graphics
	Graphic Memory	Shared system memory up to 256 MB SDRAM
	VGA	1
	DVI	1 (DVI-D)
	Multiple Display	Dual display
	Display Mode	VGA up to 1920 x 1080 DVI-I up to 1920 x 1200
Ethernet	Controller	2 x Intel® 82574L GbE LAN
Audio	Controller	Realtek® ALC888 HD Audio Codec
Super I/O	Controller	Fintek F71882FG
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
I/O Interface	USB	6 x USB 2.0 (2 x internal)
	Serial	6 x COM (COM1&2: rear; COM3~6: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~6: RS-232, 0V/5V/12V
	Parallel	1
Expansion Slot	PCI	1
	Mini-PCIe	1 x Full-size
Storage	SATA	2 x SATA 2.0
	IDE	1
Power Supply	DC	N/A
	ATX	ATX-Power 20P
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.43 kg
Certification	EMC	FCC Class B, CE, C-Tick, VCCI, BSMI

Features

- Ultra low power and fanless design
- Slim and thin client without noise
- Intel® Atom™ N270 processor
- Support 2 x SATA 2.0
- Hardware video decoder for MPEG2
- Hyper-Threading™ supported

Ordering Information

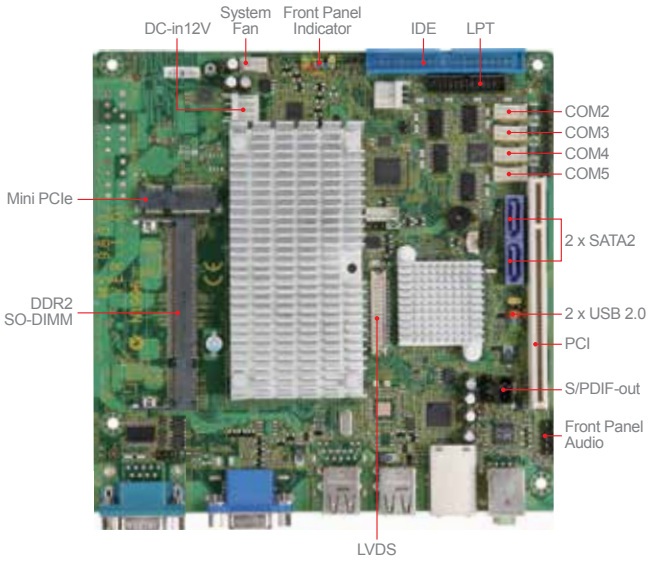
Part Number	Description
919-9830-011	MS-9830 VER 31 NTEL ATOM N270, ATX POWER

Packing List

Part Number	Description	Quantity
K12-1080099-E06	ATA CABLE	1
K1D-3004008-E06	SATA POWER CABLE	2
K1D-1008068-E06	SATA SIGNAL CABLE	2
G52-98302X3-Q13	USER MANUAL	1
G71-SEDC026-J24	DRIVER CD	1
K14-1018003-V03	COM PORT CABLE	1
E21-9830060-A91	IO SHIELD	1

MS-9830-C

Intel® Atom™ Solution for Low power and High Performance with DC Power



Specifications

Processor	CPU	Intel® Atom™ Processor N270
	Frequency	1.6 GHz
	L2 Cache	512 KB
	CPU Type	BGA
	Chipset	Intel® 945GSE + ICH7M
	BIOS	AMI
Memory	Technology	Single-channel DDR2 400/533MHz
	Max. Capacity	Up to 1 GB
	Socket	1 x 200-pin SO-DIMM
Display	Controller	Intel® GMA950 Graphics
	Graphic Memory	Shared system memory up to 256 MB SDRAM
	LVDS	Dual channel 18/24-bit
	VGA	1
	Multiple Display	Dual display
	Display Mode	VGA up to 1920 x 1080 LVDS up to 1920 x 1200
Ethernet	Controller	1 x Intel® 82574L GbE LAN
Audio	Controller	Realtek® ALC888 HD Audio Codec
Super I/O	Controller	Fintek F71882FG
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
I/O Interface	USB	6 x USB 2.0 (2 x internal)
	Serial	5 x COM (COM1: rear; COM2~5: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~5: RS-232, 0V/5V/12V
	Parallel	1
Expansion Slot	PCI	1
	Mini-PCIe	1 x Full-size
Storage	SATA	2 x SATA 2.0
	IDE	1
Power Supply	DC	DC-in 12V
	ATX	N/A
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.37 kg
Certification	EMC	FCC Class B, CE, C-Tick, VCCI, BSMI

Features

- Ultra low power and fanless design
- Slim and thin client without noise
- Intel® Atom™ N270 processor
- Support 2 x SATA 2.0
- Hardware video decoder for MPEG2
- Hyper-Threading™ supported

Ordering Information

Part Number	Description
919-9830-012	MS-9830 VER 31 OPT C Mini-ITX ,Intel ATOM N270 DC POWER IN

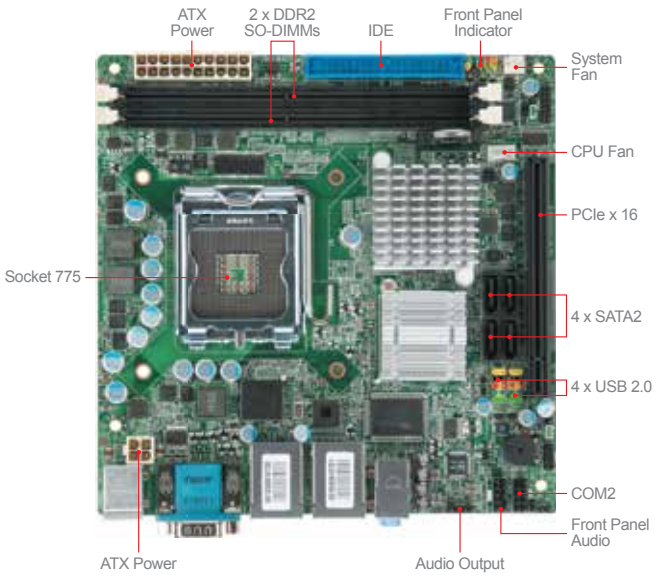
Packing List

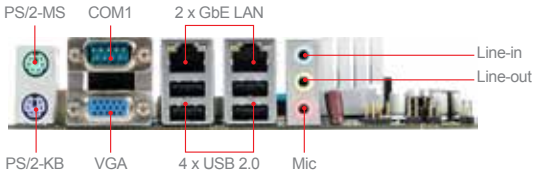
Part Number	Description	Quantity
K12-1080099-E06	ATA CABLE	1
E21-9830040-C22	IO SHIELD	1
G52-98302X3-Q13	USER MANUAL	1
G71-SEDC026-J24	DRIVER CD	1
K14-1018003-V03	COM PORT CABLE	1
K1D-1012007-V03	SATA CABLE, SIGNAL/POWER	1
K10-3002126-V03	ROUND CABLE(4P HSG TO DC PLUG)	1

MSI reserves the right to change the specifications without prior notices.

MS-9820

Security and Manageability for Minimizing TCO





Specifications

Processor	CPU	Intel® Core™ Extreme/Quad/Duo Celeron™ Mobile Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket LGA 775
	Chipset	Intel®Q35 + ICH9DO
	BIOS	AMI
Memory	Technology	Dual-channel DDR2 667/800MHz
	Max. Capacity	Up to 4GB
	Socket	2 x 240-pin DIMMs
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 384 MB SDRAM
	VGA	1
	Multiple Display	Single display
	Display Mode	VGA up to 2560 x 1600
Ethernet	Controller	1 X Intel® 82566DM GbE LAN 1 X Intel® 82573L GbE LAN
Audio	Controller	Realtek® ALC888 HD Audio Codec
Super I/O	Controller	Fintek F71822FG
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Infineon SLB9635TT1.2
I/O Interface	USB	8 x USB 2.0 (4 x rear; 4 x internal)
	Serial	2 x COM (COM1: rear; COM2: internal) COM1~2: RS-232
	PS/2	1
Expansion Slot	PCIe x16	1
	Mini-PCIe	1 x Full-size
Storage	SATA	4 x SATA 2.0
Power Supply	DC	N/A
	ATX	ATX-Power 20P, 12V-4P
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.42 Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Support Intel® 45nm Core™ 2 Duo processor
- Support 4 x SATA ports with RAID 0/1/5/10
- Support Intel® iAMT 3.0
- Integrated Crypo chip with Infineon TPM 1.2 for security
- Support MS-9904 HDMI ADD2 card

Ordering Information

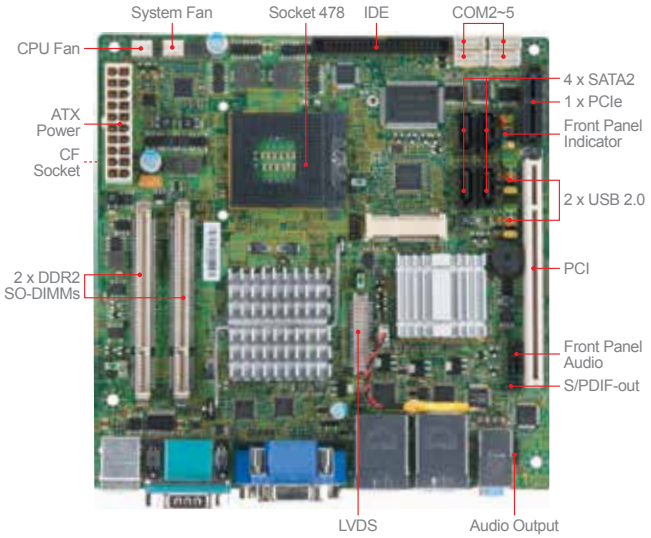
Part Number	Description
919-9820-001	MS-9820 VER 0A INTEL Q35, SOCKET LGA775, ATX POWER

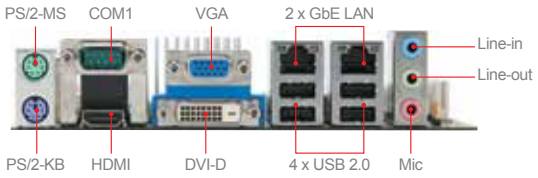
Packing List

Part Number	Description	Quantity
G52-98201X1-Q13	USER MANUAL	1
K1D-3004008-E06	SATA POWER CABLE	1
K1D-1008055-E06	SATA SIGNAL CABLE	1
E21-9820010-C22	IO SHIELD	1
G71-SEDC017-J24	DRIVER CD	1

MS-9818

Extreme Performance with Superior Quality and Security





Specifications

Processor	CPU	Intel® Core™ Extreme/Quad/Duo Celeron™ Mobile Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket P
	Chipset	Intel® GM45 + ICH9M-E
	BIOS	AMI
Memory	Technology	Dual-channel DDR2 533/667/800MHz
	Max. Capacity	Up to 4GB
	Socket	2 x 200-pin SO-DIMMs
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	LVDS	Dual channel 18/24-bit
	VGA	1
	DVI	1 (DVI-D)
	HDMI	1
	Multiple Display	2 independent displays
	Display Mode	VGA up to 1920 x 1080 DVI up to 1920 x 1080 HDMI up to 1920 x 1080
Ethernet	Controller	1 x Intel® 82567LM GbE LAN 1 x Intel® 82574 GbE LAN
Audio	Controller	Realtek® ALC888 HD Audio Codec
Super I/O	Controller	Winbond 83627DHG
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Pin header
I/O Interface	USB	8 x USB 2.0 (4 x rear; 4 x internal)
	Serial	5 x COM (COM1: rear; COM2~5: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~5: RS-232
	PS/2	1
Expansion Slot	PCIe x1	1
	PCI	1
	Mini-PCIe	1 x Full-size
Storage	SATA	4 x SATA 2.0
	IDE	1
	CompactFlash	1
Power Supply	DC	N/A
	ATX	ATX-Power 20P, 12V-4P
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.58 Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Support Intel® Core™ 2 Duo Mobile processor
- Support TPM & iAMT 4.0 (optional)
- Multiple video outputs: HDMI, DVI, VGA, LVDS
- Support DirectX® 10 & Intel® Clear Video technology

Ordering Information

Part Number	Description
919-9818-001	MS-9818 VER 11 OPT A INTEL GM45 with SOCKET P, ATX POWER

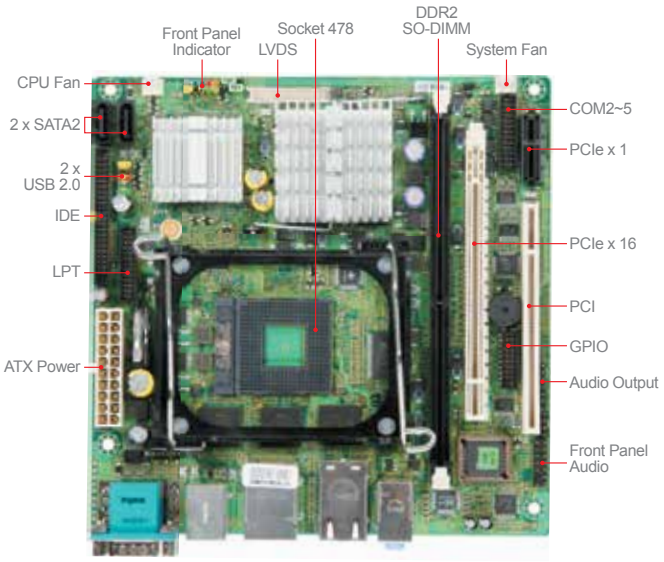
Packing List

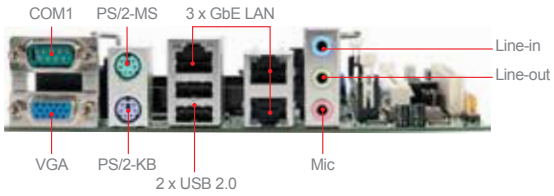
Part Number	Description	Quantity
G52-98182X1-Q13	User MANUAL	1
G71-SEDC021-J24	DRIVER CD	1
K1D-3004008-E06	SATA CABLE,POWER	2
K11-1084001-V03	IDE CABLE	1
E21-9818010-C22	I/O SHIELD	1
E32-0900610-C24	FANSINK	1
K1D-1080054-E06	SATA CABLE SIGNAL	2

MSI reserves the right to change the specifications without prior notices.

MS-9642-GME2

Intel® Mini-ITX with Three LAN and 2 SATAII





Specifications

Processor	CPU	Intel® Pentium M, Celeron M Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket (mPGA 478)
	Chipset	Intel® 945GME + ICH7M
	BIOS	Award
Memory	Technology	Single-channel DDR2 533/667MHz
	Max. Capacity	Up to 2GB
	Socket	1 x 240-pin DIMM
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 256 MB SDRAM
	LVDS	Single channel 24-bit
	VGA	1
	Multiple Display	2 independent displays
	Display Mode	VGA up to 1920 x 1080 LVDS up to 1920 x 1200
Ethernet	Controller	3 x Intel® 82573L GbE LAN
Audio	Controller	Realtek® ALC888 HD Audio Codec
Super I/O	Controller	Winbond W83627EHG
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Pin header
I/O Interface	USB	4 x USB 2.0 (2 x rear; 2 x internal)
	Serial	5 x COM (COM1: rear; COM2~5: internal) COM1: RS-232 COM2~5: RS-232/422/485, 0V/5V/12V
	Parallel	1
	PS/2	1
	GPIO	16-bits (8 x GPI; 8 x GPO), 5V
Expansion Slot	PCIe x16	1
	PCIe x1	1
	PCI	1
Storage	SATA	2 x SATA 2.0
	IDE	1
	CompactFlash	N/A
Power Supply	DC	N/A
	ATX	ATX-Power 20P, 12V-4P
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.36 Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Support Intel® Pentinum, Celerom® Mobile processor
- Optional Intel® Celeron® M ULV 423 (1.06GHz@5.5W) for ultra low power and fanless solution
- Support 3 Intel® GbE LAN
- Support PCIe x16 slot for high-end graphic and PCIe x1/x4/x8/x16 card

Ordering Information

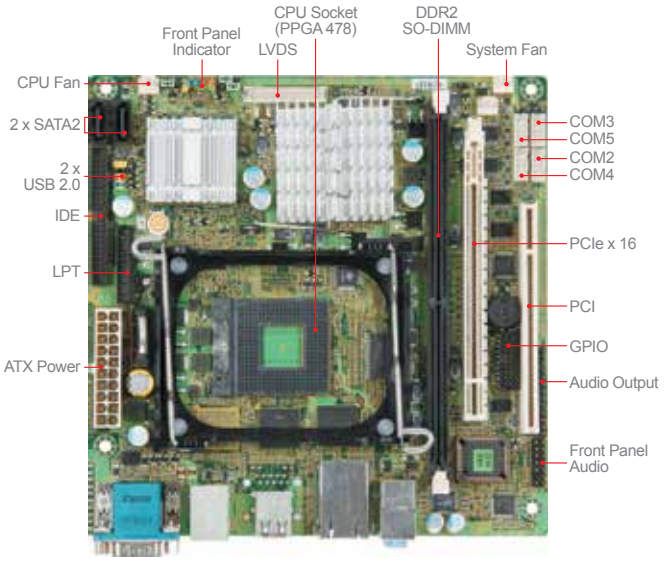
Part Number	Description
919-9642-013	MS-9642 VER 40 INTEL 945GME PGA 478pin SOCKET, ATX POWER IN, 3 LANS

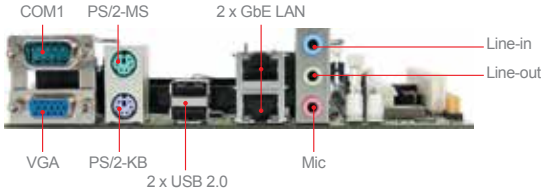
Packing List

Part Number	Description	Quantity
E32-0900331-A21	FANSINK	1
E21-9642010-C22	IO SHIELD	1
K11-1084001-V03	IDE CABLE	1
G71-SEDC011-J24	DRIVER CD	1
G52-96421X5-Q13	USER MANUAL	1
K10-1026001-V03	PRINTER PORT FLY CABLE	1
K1D-1080054-E06	SATA CABLE, SIGNAL	2
K1D-3004008-E06	SATA CABLE, POWER	2
K10-1028003-V03	4COM PORT FLY CABLE WITH BRACKET	1

MS-9642-GME3

Intel® Mini-ITX with Two LAN and 2 SATAII





Specifications

Processor	CPU	Intel® Pentium M, Celeron M Processor
	CPU Type	Socket (mPGA 478)
	Chipset	Intel® 945GME + ICH7M
	BIOS	Award
Memory	Technology	Dual-channel DDR2 533/667MHz
	Max. Capacity	Up to 2GB
	Socket	1 x 240-pin DIMM
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 256 MB SDRAM
	LVDS	Single channel 24-bit
	VGA	1
	Multiple Display	2 independent displays
	Display Mode	VGA up to 1920 x 1080 LVDS up to 1920 x 1200
Ethernet	Controller	2 X Intel® 82573L GbE LAN
Audio	Controller	Realtek® ALC888 HD Audio Codec
Super I/O	Controller	Winbond W83627EHG
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Pin header
I/O Interface	USB	4 x USB 2.0 (2 x rear; 2 x internal)
	Serial	5 x COM (COM1: rear; COM2~5: internal) COM1: RS-232 COM2~5: RS-232/422/485, 0V/5V/12V
	Parallel	1
	PS/2	1
	GPIO	16-bits (8 x GPI; 8 x GPO), 5V
Expansion Slot	PCIe x16	1
	PCIe x1	1
	PCI	1
Storage	SATA	2 x SATA 2.0
	IDE	1
Power Supply	DC	N/A
	ATX	ATX-Power 20P, 12V-4P
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)
	Weight	0.30 Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- Support Intel® Core™ 2 Duo, Core™ Duo, Celeron® Mobile processor
- Support dual Intel® GbE LAN
- Support DDR2 667 memory up to 2GB
- Support PCIe x 16 slot for high-end graphic and PCIe x1/x4/x8/x16 card

Ordering Information

Part Number	Description
919-9642-009	MS-9642 VER 30 INTEL 945GME, SOCKETM, ATX POWER IN, DUAL LANS

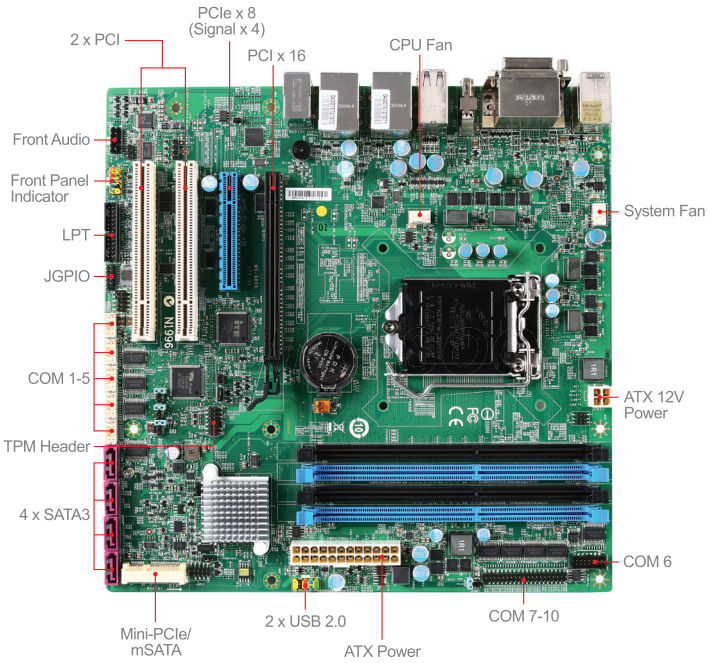
Packing List

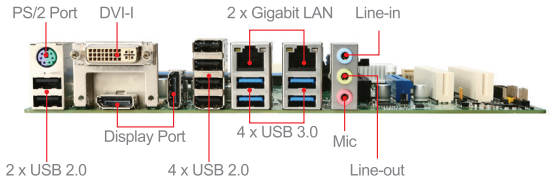
Part Number	Description	Quantity
E21-9642011-C22	O SHIELD	1
E32-0900331-A21	FANSINK	1
G52-96421X4-Q13	USER MANUAL	1
G71-SEDC011-J24	DRIVER CD	1
K10-1026001-V03	PRINTER PORT FLY CABLE	1
K11-1084001-V03	IDE CABLE	1
K1D-3004008-E06	SATA CABLE, POWER	2
K1D-1008055-E06	SATA CABLE, SIGNAL	2
K14-1018003-V03	INT COM PORT CABLE	1

MSI reserves the right to change the specifications without prior notices.

MS-98D6

Intel® 4th Gen Q87 Micro-ATX Solution for High Performance, with Superior I/O and Expansion Capability





NEW

Specifications

Processor	CPU	4th Gen Intel® Desktop H3 Core i7/i5/i3/ Celeron Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket (LGA 1150)
	Chipset	Intel® Q87 Express
	BIOS	AMI
Memory	Technology	Dual-channel DDR3 1066/1333/1600MHz
	Max. Capacity	Up to 32 GB
	Socket	4 x 240-pin Long-DIMMs
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	DVI	1 (DVI-I)
	DisplayPort	2
	Multiple Display	3 independent displays
	Display Mode	DP up to 3840 x 2160 DVI up to 1920 x 1200
Ethernet	Controller	1 x Intel® I217-LM GbE-PHY 1 x Intel® I210-AT PCIe GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866AD-I + F81216AD
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Pin header
I/O Interface	USB	8 x USB 2.0 (6 x rear; 2 x internal) 4 x USB 3.0 (4 x rear)
	Serial	10 x COM (internal) COM1~COM4: RS-232, 0V/5V/12V COM5: RS-232/422/485, 0V/5V/12V COM6: RS-232/422/485, without power COM7~COM10: RS-232, 0V/5V/12V (COM1 & COM2 support WOR)
	Parallel	1
	PS/2	1
	GPIO	8-bits (4 x GPI, 4 x GPO), 5V
Expansion Slot	PCIe x16	1
	PCIe x8	1*PCIe x8 (signal is x4)
	PCI	2
	Mini-PCIe	1 x Full-size, mSATA
Storage	SATA	4 x SATA 3.0
	mSATA	1
Power Supply	DC	N/A
	ATX	ATX-Power 24P, 12V-4P
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	244 mm x 244 mm (uATX)
	Weight	0.73 Kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI

Features

- 10 COM ports for flexible applications
- Multiple video outputs: DVI-I, DP (3 independent displays)
- Support DirectX 11.1 and Intel® Clear Video Technology (up to 1080P)
- Multiple expansion slots: PCIe x16, PCI x8 (x4 signal), and 2*PCI
- 4 SATA 3.0 ports for faster and high-capacity storage
- Support m-SATA function by Mini-PCIe slot
- Plenty USB ports for more peripherals (USB 2.0*8 USB 3.0*4)

Ordering Information

Part Number	Description
919-98D6-001	MS-98D6\MS-98D6\609-98D6-010\809-98D6-002\ STD MS-98D6 VER 10 OPT A COM CABLE+SATA CABLE+I/O SHIELDING+DRIVER CD SINGLE

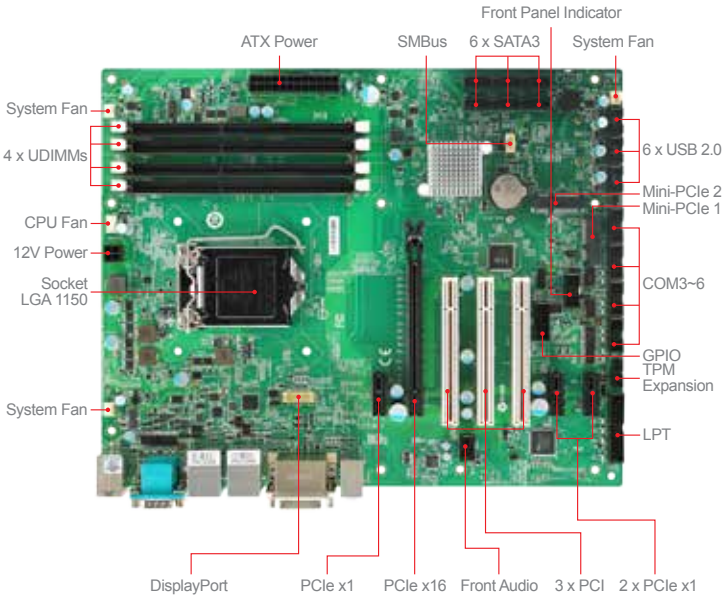
Packing List

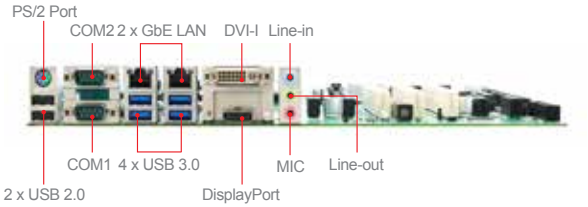
809-98D6-002

Part Number	Description	Quantity
E21-98D6010-C22	IO SHIELD FOR MS-98D6	1
K14-1018003-V03	COM PORT CABLE	1
K14-1036004-V03	COM PORT CABLE 2*20pin	1
K1D-1008261-V03	SATA CABLE,SIGNAL	2

MS-98B5

Intel® Embedded Haswell with Q87/H81 High-Performance ATX Solution





Coming Soon

Specifications

Processor	CPU	4th Gen Intel® Core™ i7/i5/i3/Pentium/ Celeron Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket (LGA 1150)
	Chipset	Intel® Q87/H81 Express
	BIOS	AMI
Memory	Technology	Dual-channel DDR3/DDR3L 1333/1600MHz
	Max. Capacity	Up to 32GB
	Socket	4 x 240-pin DIMMs
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	DVI	1 (DVI-I)
	DisplayPort	1
	Multiple Display	2 independent displays (H81 SKU) 3 independent displays (Q87 SKU)
	Display Mode	VGA up to 1920 x 1080 DVI-D up to 2560 x 1600 DP up to 2560 x 1600
Ethernet	Controller	1 x Intel® I217-LM GbE LAN PHY 1 x Intel® I210-AT GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866AD-I
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Pin header
I/O Interface	USB	8 x USB 2.0 (Q87: 2 x rear; 6 x internal; H81: 4 x rear; 4 x internal) 4 x USB 3.0 (Q87: 4 x rear; H81: 2 x rear)
	Serial	6 x COM (COM1~2: rear; COM3~6: internal) COM1~2: RS-232/422/485, 0V/5V/12V COM3~6: RS-232, 0V/5V/12V
	Parallel	Yes
	PS/2	1 x PS/2 port by Y-cable for keyboard and mouse
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCIe x16	1
	PCIe x1	3
	PCI	3
	Mini-PCIe	2 x Full-size (Q87 only)
Storage	SATA	6 x SATA 3.0 (H81 SKU only support 2 x SATA 2.0, 2 x SATA 3.0) (Q87 SKU support RAID 0/1/5/10)
Power Supply	DC	N/A
	ATX	ATX-Power 24P, 12V-4P
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	305mm x 244mm (ATX)
	Weight	0.70 kg
Certification	EMC	FCC, CE, C-Tick, VCCI, BSMI (Class A)

Features

- Intel® Haswell Series CPU to maximize performance
- 4 DDR3/DDR3L 1600MHz UDIMMs up to 32GB
- Support DisplayPort, DVI-I, Dual Intel® GbE LAN and AMT 9.0
- 6 x SATA 3.0; 6 x COM; 4 x USB 3.0; 8 x USB 2.0
- Support ATX power

Ordering Information

Part Number	Description
Coming soon	

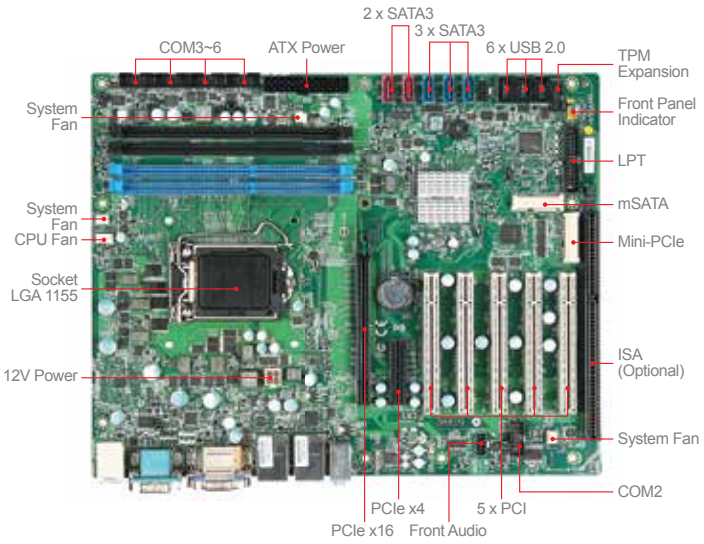
Packing List

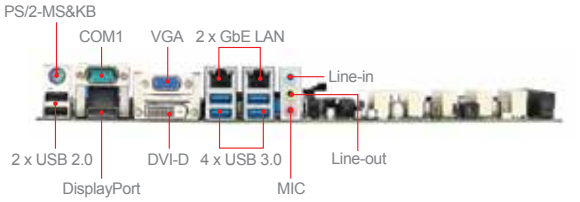
Part Number	Description
Coming soon	

MSI reserves the right to change the specifications without prior notices.

MS-98A9

Intel® Embedded Ivy Bridge with Q77 High-performance ATX Solution





Features

- Intel® Ivy Bridge and Sandy Bridge Series CPU to maximize performance
- Support 4 DDR3 1600MHz UDIMM up to 32GB
- Support DisplayPort, DVI-D, VGA, and dual Intel® GbE LAN
- 2 x SATA 3.0, 3 x SATA 2.0, mSATA, AMT 8.0, 6 x COM, 4 x USB 3.0, 8 x USB 2.0
- Support ATX power

Ordering Information

Part Number	Description
919-98A9-001	MS-98A9 VER 1.1 INTEL IVY BRIDGE+Q77, 4*DDR3, 1*VGA+1*DVI,1*DP, 10*USB 2.0, 4*USB 3.0, 2*GBE LAN, 1*Mini-PCIe, 1*mSATA, 3*SATA2, 2*SATA3, with ISA
919-98A9-002	MS-98A9 VER 1.1 INTEL IVY BRIDGE+Q77, 4*DDR3, 1*VGA+1*DVI,1*DP, 10*USB 2.0, 4*USB 3.0, 2*GBE LAN, 1*Mini-PCIe, 1*mSATA, 3*SATA2, 2*SATA3, without ISA

Packing List

Part Number	Description	Quantity
K14-1018004-V03	Internal COM Port DB9 x 2 CABLE with BRACKET	2
K18-1025011-V03	Internal DB25 x 1 LPT CABLE with BRACKET	1
K1B-3008012-E06	Internal USB 2.0	1
K39-3002004-E06	External PS/2 Y-Cable	1
K1D-1080054-E06	SATA Cable	2
E21-98A9010-C22	I/O Shielding	1
G71-SEDC078-J24	Driver DVD	1

Specifications

Processor	CPU	Intel® Core™ i7/i5/i3/Pentium/Celeron Processor
	Frequency	Depends on CPU
	L2 Cache	Depends on CPU
	CPU Type	Socket (LGA 1150)
	Chipset	Intel® Q77 Express
	BIOS	AMI
Memory	Technology	Dual-channel DDR3 1333/1600MHz
	Max. Capacity	Up to 32GB
	Socket	4 x 240-pin DIMMs
Display	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	VGA	1
	DVI	1 (DVI-D)
	DisplayPort	1
	Multiple Display	2 independent displays (SNB CPU only) 3 independent displays (IVB CPU only)
	Display Mode	VGA up to 1920 x 1080 DVI-D up to 1920 x 1200 DP up to 2560 x 1600 HDMI up to 1920 x 1200
Ethernet	Controller	1 x Intel® 82579LM GbE LAN PHY 1 x Intel® 82583V GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Pin header
I/O Interface	USB	4 x USB 3.0 (rear) 8 x USB 2.0 (2 x rear; 6 x internal)
	Serial	6 x COM ports (COM1: rear; COM2~6: internal) COM1&2: RS-232/422/485, 0V/5V/12V COM3~6: RS-232, 0V/5V/12V
	Parallel	1
	PS/2	1
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	PCIe x16	1
	PCIe x4	1
	PCI	5
	Mini-PCIe	1 x Full-size
Storage	SATA	2 x SATA 3.0; 3 x SATA 2.0 (support RAID 0, 1, 5, 10)
	mSATA	1
Power Supply	DC	N/A
	ATX	ATX-Power 24P, 12V-4P
Environment	Operating Temperature	0 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
Form Factor	Dimensions	305mm x 244mm (ATX)
	Weight	0.75 kg
Certification	EMC	FCC Class A, CE, C-Tick, VCCI, BSMI

*1 x ISA (optional)

MSI IPC WORLDWIDE SALES TEAM CONTACT INFORMATION

Europe and Africa
Jasmine Liao
Tel: 886-2-3234-5599 #8840
E-mail: jasmineliao@msi.com

Russia, Middle East and Eastern Europe
Russell Liao
Tel: 886-2-3234-5599 #1181
E-mail: russellliao@msi.com

Asia
Nadine Chang
Tel: 886-2-3234-5599 #1192
E-mail: nadinechang@msi.com

USA
Russell Liao
Tel: 886-2-3234-5599 #1181
E-mail: russellliao@msi.com

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